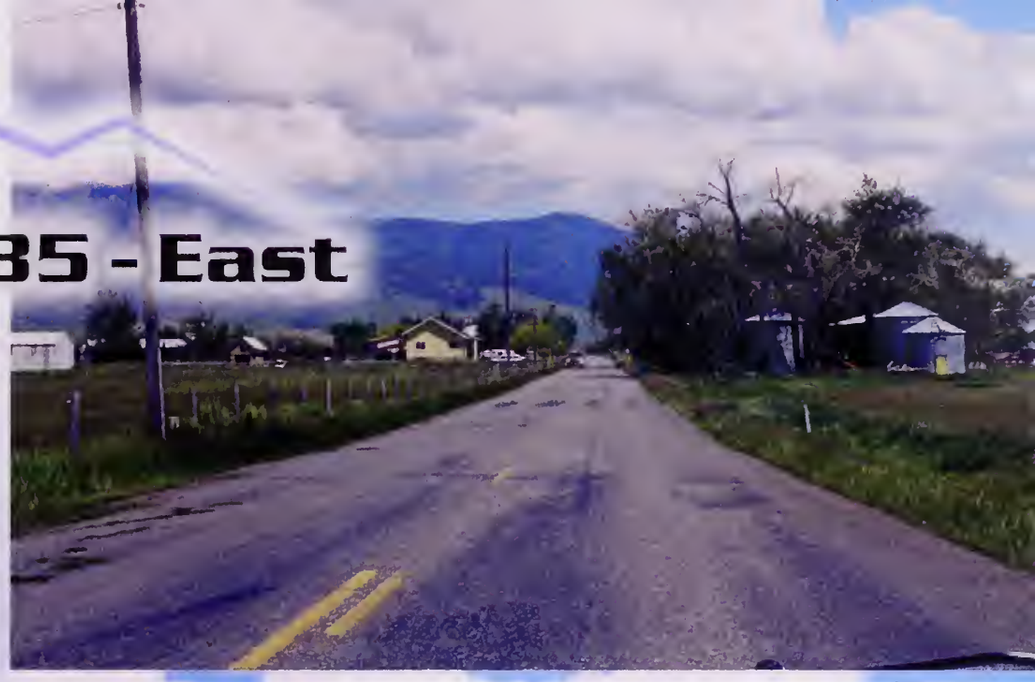
Junction MT 85 - East



Environmental Assessment

Prepared for:

Montana Department of Transportation

Prepared by:

Carter-Burgess

Junction MT 85 - East

STPS-235-1(8)0
Control Number 4470

Environmental Assessment

Prepared for:
Montana Department of Transportation

Prepared by:
Carter Burgess

February 2003

Environmental Assessment
For
JUNCTION MT-85-EAST
CONTROL NO. 4470
IN
GALLATIN COUNTY

This document is prepared in conformance with the Montana Environmental Policy Act (MEPA) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted Pursuant to 42 USC 4332(2)(c) 49 U.S.C. 303
and Sections 2-3-104, 75-1-201 M.C.A.
by the
Montana Department of Transportation
and
U.S. Department of Transportation, Federal Highway Administration

Submitted by:

1-27-03
Date

Dave Hill
for Montana Department of Transportation

Reviewed and Approved for Distribution:

1/27/03
Date

Joseph Kaufman
for Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

Jean A. Riley, PE
Engineering Section Supervisor
Environmental Services
Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena, Montana 59620-1001

Dale Paulson
Program Development Engineer
Federal Highway Administration
2880 Skyway Drive
Helena, MT 59602

Table of Contents

Appendices

Appendix A: Agency Correspondence
Appendix B: Programmatic Section 4(f) Evaluation

List of Figures

List of Tables

EXECUTIVE SUMMARY

The Montana Department of Transportation (MDT), in conjunction with the Federal Highway Administration (FHWA), proposes to reconstruct Montana Secondary Highway 235, East Valley Center Road, along its current alignment, from Montana Highway 85 to the I-90 underpass. The reconstruction will include a two-lane roadway with shoulders, flattening of vertical curves to improve sight distance, the addition of left-turn bays at major intersections, the replacement of culverts and bridges, curb and gutter along a portion of the roadway, and a pedestrian/bike path along the south side of the roadway.

The project is located in Gallatin County in southwestern Montana. The roadway improvements will be along a 7.3-kilometer (4.5-mile) corridor of East Valley Center Road beginning at MT 85 and ending at the intersection with the I-90 underpass. The surrounding land uses consist of older farm buildings, agricultural fields and newer subdivisions.

Since 1995 the average daily traffic has increased significantly, primarily due to development along the eastern end of the corridor. The accident rate for this corridor for the period 1990 through 1999 is 40 percent above the Statewide average for this classification of road. The intent of the project is to provide a two-lane roadway that meets MDT's geometric design standards and provides needed improvements in safety and operation for the traveling public.

The Preferred Alternative consists of two travel lanes with shoulders and sloped embankments. The current width of pavement is approximately 6.8 meters (22 feet). The proposed width of pavement will vary from 12.0 to 12.8 meters (39 to 42 feet), except at major intersections where 3.6 meters (12 feet) right or left turn pocket are added. The pedestrian/bike path will add another 3 meters (10 feet) to the proposed cross section.

The environmental impacts and mitigation measures associated with this project are discussed in Chapter 3.0. The more notable impacts are listed below:

- **Right-of-Way**. An estimated 16 hectares (39.6 acres) of additional right-of-way will be required for the Preferred Alternative. No relocations of businesses are required by the project. One residential relocation will be required as part of the project.
- **Cultural.** Four historic sites, which are eligible for the National Register of Historic Places, will be affected by the project. The State Historic Preservation Officer has determined that there will be No Adverse Effect to these properties as a result of the project (see letter in Appendix A).
- **Parkland.** Some land identified as "Park" will be needed for this project. Three of the parkland sites are subject to 4(f) evaluation. A programmatic 4(f) evaluation form for each of the three sites is included in Appendix B. Coordination with Gallatin

County has occurred and a letter of concurrence from the County concerning these sites is included in Appendix A.

- **Wetlands.** Impacts to wetlands occur at creek crossings and with roadside ditch relocation. Total impacts will be approximately 0.3 hectare (0.7 acre). Jurisdictional wetland impacts will be approximately 0.17 hectare (0.42 acre). Wetland mitigation will follow the Section 404 permit requirements approved by the U.S. Army Corps of Engineers.
- **Section 4(f).** Seven sites impacted by this project are subject to Section 4(f). Chapter 4.0 includes the evaluation of the four historic properties and three park sites that are impacted by the project and subject to 4(f) statute.

Chapter 1.0

CHAPTER 1.0: PURPOSE AND NEED FOR ACTION

1.1 Proposed Action

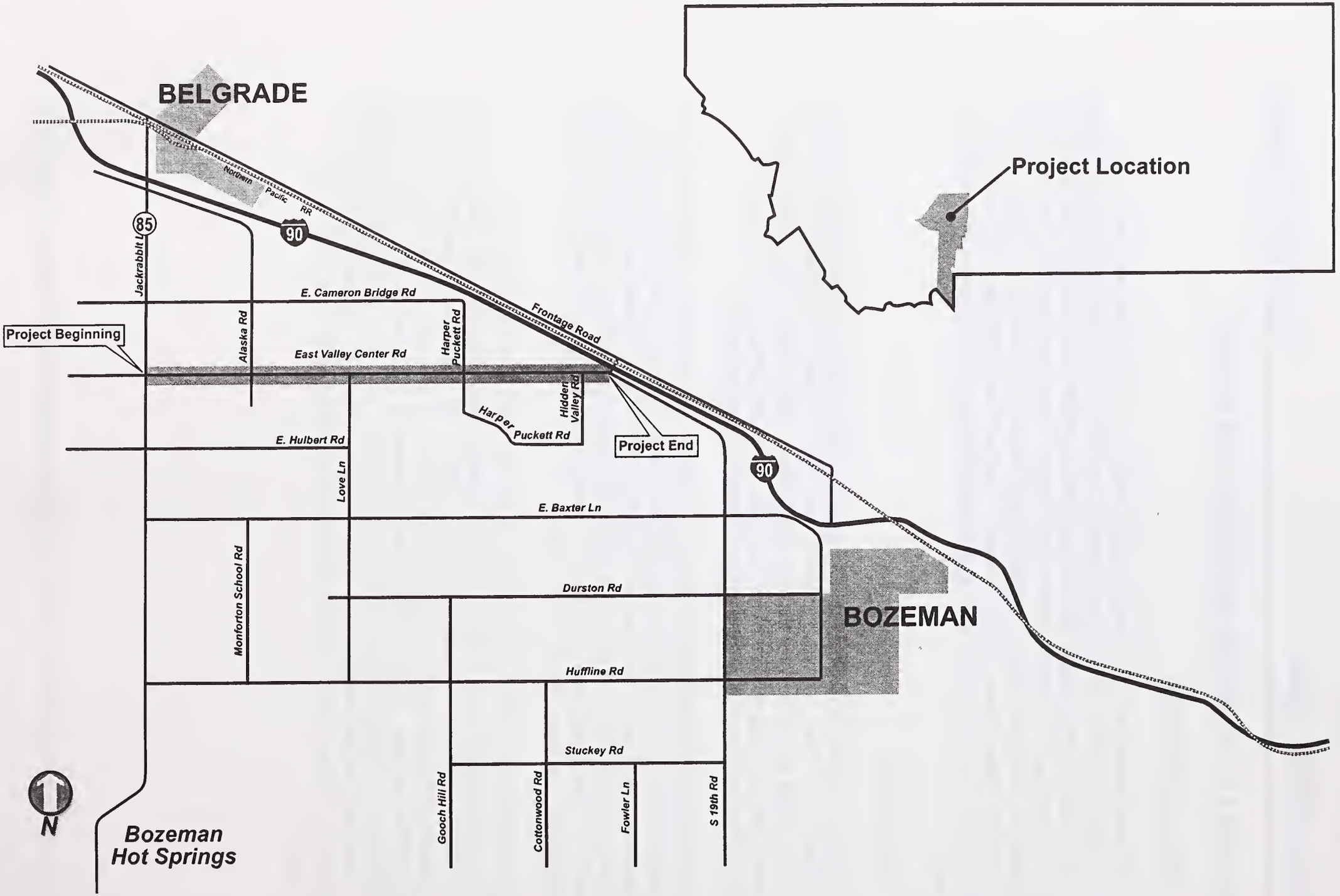
The Montana Department of Transportation (MDT), in conjunction with the Federal Highway Administration (FHWA), proposes to reconstruct Montana Secondary Highway 235, East Valley Center Road, along its current alignment, from Montana Highway 85 to the I-90 underpass. The reconstruction will include a two-lane roadway with shoulders, a flattening of vertical curves to improve sight distance, the addition of right or left turn bays at major intersections, the replacement of culverts and bridges, curb and gutter along a portion of the roadway, and a pedestrian/bike path along the south side of the roadway.

1.2 Study Area

The project is located in Gallatin County in the Gallatin Valley of southwestern Montana (see **Figure 1-1**). The valley is high and broad and is ringed by mountains that rise up to 1.2 kilometers (4,000 feet) above the valley floor. East Valley Center Road travels east-west through Gallatin County. The terrain includes gently rolling hills and the current vertical alignment of the roadway follows the natural terrain.

The roadway improvements will be along a 7.3-kilometer (4.5-mile) segment known as Secondary Road 235 or as East Valley Center Road. The study area begins at the intersection of the East Valley Center Road with MT 85, also known as Jackrabbit Lane, at Reference Point (RP) 0.0 and continues east to the underpass at I-90 at RP 4.5 (see **Figure 1-2**.) The study area is located in Township 1S, Range 4E, Sections 24 and 25, and Range 5E, Sections 19-22 and 27-30.

Within the study area and along the road, there are older farm buildings, new subdivisions and agricultural fields. There are above and below ground utilities along the sides of the roadway. There are several creeks and irrigation ditches that cross the study area and the roadway via culverts and bridges. There are also roadside ditches parallel to the roadway. Some of the older homesteads have large trees and there is a concentration of vegetation along some of the creeks. This area is experiencing a high rate of new residential development. Since 1995 several new subdivisions have been developed along the corridor and the average daily traffic volume has increased significantly.

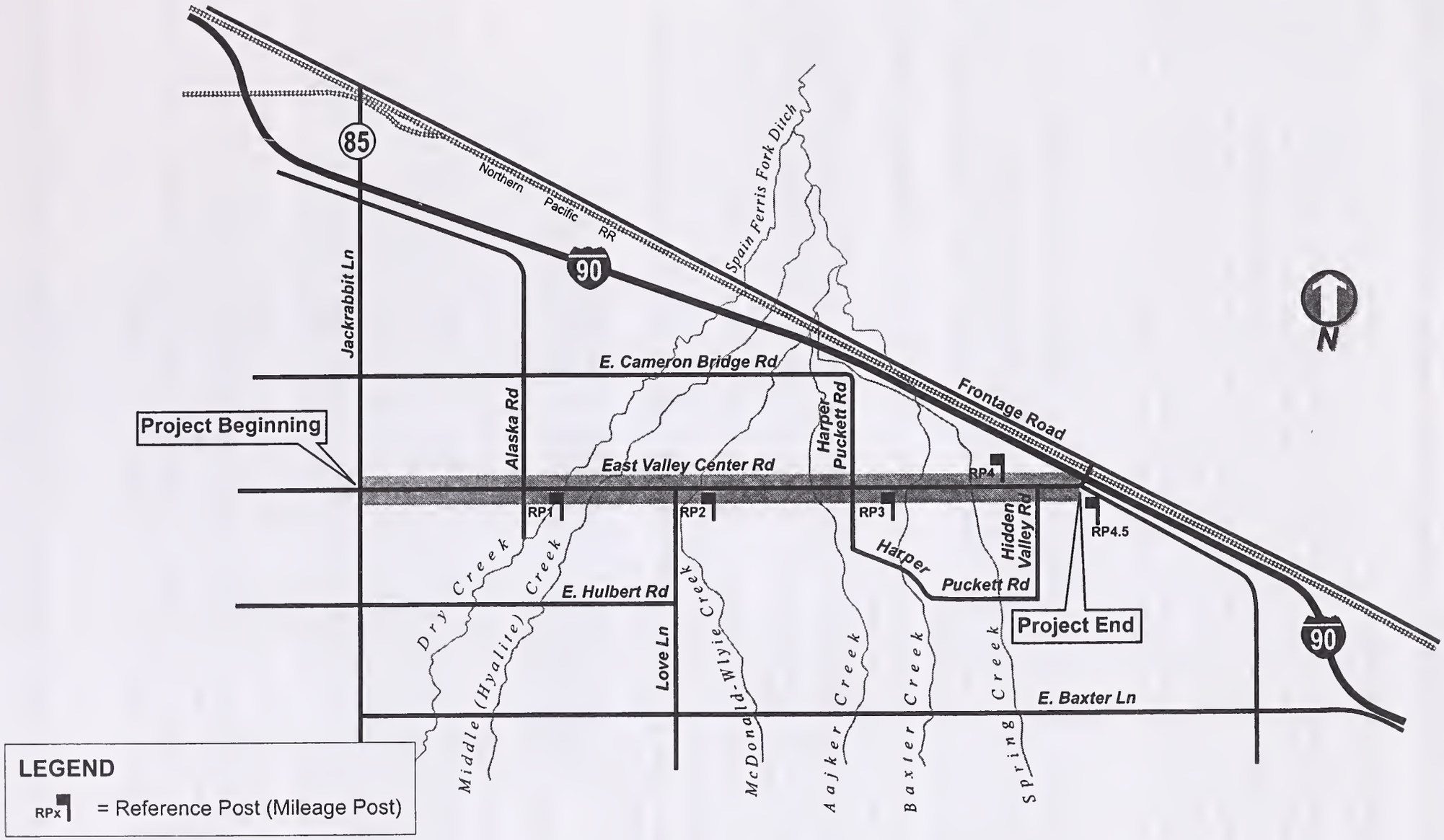


Junction MT-85 - East

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Project Location.FH9 (8/2001)

Project Location

Figure 1-1



Junction MT-85 - East

Study Area

Figure 1-2

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Study Area.FH9 (8/2001)

1.3 Purpose and Need

The proposed action would reconstruct the existing roadway along its current alignment. The Montana Department of Transportation has determined that the roadway is inadequate for existing and projected future traffic volumes and characteristics. The intent of this project is to provide a two-lane roadway that meets MDT's geometric design standards to provide needed improvements in safety and operation for the traveling public. A design speed of 100 km/h (65 mph) is considered appropriate for this roadway which currently has a posted speed limit of 72 km/h (45 mph).

The proposed action has specific elements of purpose and need, as follows:

- Provide a roadway that meets current and future transportation needs.
- Reconstruct the roadway to improve safety and correct deficiencies in the pavement structure and paved surface.
- Provide paved shoulders and flatten slopes on embankments to increase recovery zones for vehicles that leave the roadway.
- Correct deficiencies of substandard vertical alignments and improve sight distance.
- Upgrade the roadway to reduce the overall accident rate which is higher than the statewide average for two-lane roads.
- Provide turn pockets or lanes at major intersections to reduce backups and accidents associated with turning movements.
- Replace several bridges that are narrow and functionally obsolete, including the Middle (Hyalite) Creek bridge structure.
- Provide improved pedestrian/bicycle facilities along the corridor.

1.4 Existing Roadway

The existing facility is a two-lane roadway that Gallatin County constructed in 1945. The original surface was gravel and is now a 6.7-meter (22-foot) wide road mix surface. The driving lane width is 3.4 meters (11 feet) in width with no shoulders. The road follows the natural terrain, which includes gently rolling hills resulting in the existing vertical alignment being substandard. Reconstruction of the roadway is required in order to provide for adequate sight distance and to meet current secondary roadway design standards. The existing grade will be raised in some locations and lowered in others.

The side slopes along the roadway are near the edge of pavement and are quite steep in some areas. They often fall off into a roadside ditch. Reconstruction will include reducing the slope of the embankment from the edge of the pavement. The existing roadway has no sidewalk or curb and gutter and no signals.

The existing roadway includes several narrow bridges. The bridge at the crossing of Middle Creek (Hyalite Creek) is narrow and has no guardrails. This structure which was originally built in 1933 and was re-decked in 1995. The structure is timber girders and deck with concrete abutment and asphalt surface. Significant weather cracks have been noted in the timber girders. The original structure was 5.5 meters (18 feet) wide. In 2001 the County made a temporary safety improvement to this bridge by increasing the width to 7.3 meters (24 feet)

Figure 1-3 shows typical cross sections of the existing roadway.

Development along the roadway, and its usage, have increased substantially over the past ten years. There are several access points to neighborhoods or to private rural property, particularly along the east end of the project. Some older structures and some large trees are quite close to the road. Newer subdivisions have occurred along the corridor starting at the east end and growing westward over the past ten years.

1.5 Traffic Volumes

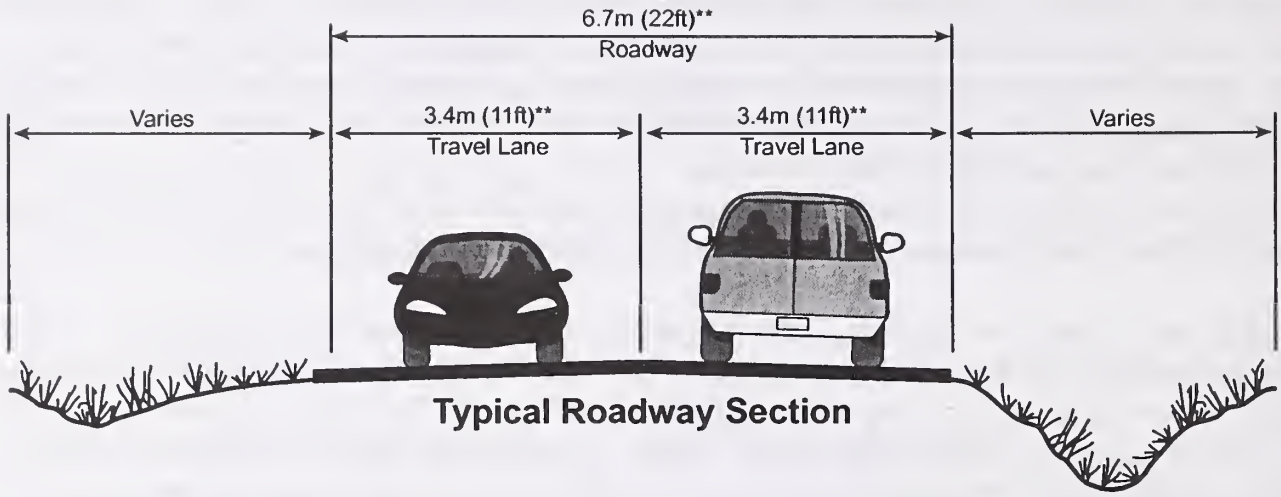
The 1995, 1997 & 1999 "*Traffic By Sections Report*", prepared by MDT, were used to obtain historical information on Average Daily Traffic (ADT) on Secondary 235 between Reference Post (RP) 0.0 and RP 4.5 (end of project). **Table 1-1** shows the traffic counts from the MDT report for the years 1995 to 1999:

Table 1-1
Average Daily Traffic Counts
1995 to 1999

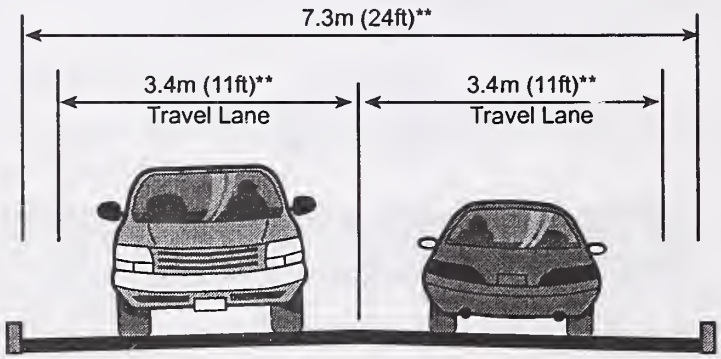
	YEAR				
	1995	**1996**	**1997**	**1998**	**1999**
ADT	380	440	1,680	3,060	2,680

The large difference in the counts between 1995 and 1999 is partly due to the new subdivisions on the eastern part of the project but probably includes a difference in counting technique or location. The subdivision growth, at present, is moving from east to west. The majority of the traffic leaving the subdivisions tends to move east along East Valley Center Road toward I-90 and then into the commercial areas of Bozeman.

The "*Greater Bozeman Area Transportation Plan 2001 Update*," predicts an ADT of 9,700 on East Valley Center Road (RP 2.0 to 4.5) by the year 2020. The western part



Typical Roadway Section



Existing Bridge Section at Middle (Hyalite) Creek

**Note: Dimensions in feet rounded to the nearest foot.

of the Valley Center Road, between Love Land and Jackrabbit Lane (RP 0-2.0), is predicted to have an ADT of 1,500 in the same year. These projections are indicative of the development which is continuing to occur on the eastern end of the study area. Traffic from these developments is oriented to and from Bozeman which is to the southeast, thus causing much higher volume on the east end of the project. These projections indicate an average annual traffic increase of 3.3 percent per year for the next 20 years. The anticipated year of opening for this project is 2005. The design year is 2025. The present and projected traffic volumes for the present year (2001), year of opening (2005), and design year (2025) are shown in **Table 1-2**.

Table 1-2
Average Daily Traffic for 2001, 2005 and 2025

	YEAR					
	2001		2005		2025	
Reference Post	0 to 2.0	2.0 to 4.2	0 to 2.0	2.0 to 4.2	0 to 2.0	2.0 to 4.2
ADT	800	5,200	900	6,000	1,800	11,400

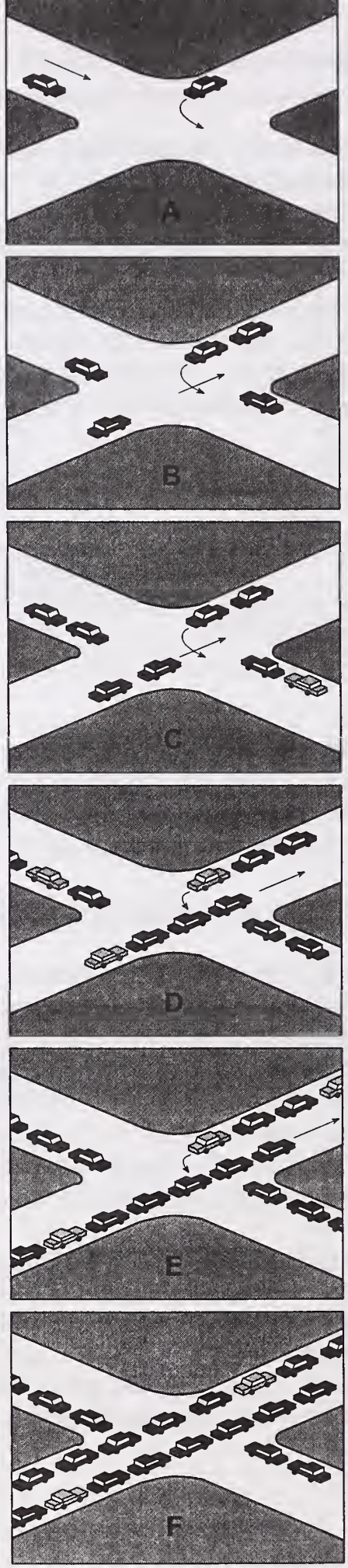
Again there is a substantial increase in traffic volume on the eastern half of the study area. Due to the growth in the number of subdivisions which directly affects the traffic rate. The amount of developable land within the project corridor is quite high and the traffic projections are based on the continuation of recent land use patterns in the area.

1.6 Level of Service

Level of Service (LOS) analysis is typically used to assess the operational conditions of a roadway segment or intersection. LOS is used to quantify the capacity of two intersecting roadways and is also used as critical design criteria in establishing geometric requirements. LOS is a qualitative measure of traffic operating conditions for both roadway segments and intersections using an alphabetic scale from A through F. LOS A represents free-flowing traffic with minimal delay while LOS F represents congestion with long periods of delays. **Figure 1-4** illustrates the LOS congestion conditions and defines the various levels for intersections.

An LOS analysis, based on the existing traffic volumes, was performed to determine the current level of operation at selected study intersections. All of the intersections within the study area are currently operating at LOS C or better. The west leg of the intersection of Jackrabbit Lane and S-235 (East Valley Center Road) is operating at LOS D. However, this leg of the intersection is not part of this project but is included in the Four Corners improvement project.

LOS	Intersections
A	No vehicle waits longer than one signal indication.
B	On a rare occasion, vehicles wait through more than one signal indication.
C	Intermittently, vehicles wait through more than one signal indication, occasionally backups may develop, traffic flow still stable and acceptable.
D	Delays at intersections may become extensive, but enough cycles with lower demand occur to permit periodic clearance, preventing excessive backups.
E	Very long queues may create lengthy delays.
F	Backups from locations downstream restrict or prevent movement of vehicles out of approach creating a "gridlock" condition.



The traffic projections and corresponding level of service forecasts prepared for this study represent a scenario for the growth of traffic in this portion of the East Valley Center Road corridor based on recent and long-term historic trends, projected into the future. This methodology allows for development of a project that will be reasonably assured of providing an adequate service life for the next 20 years.

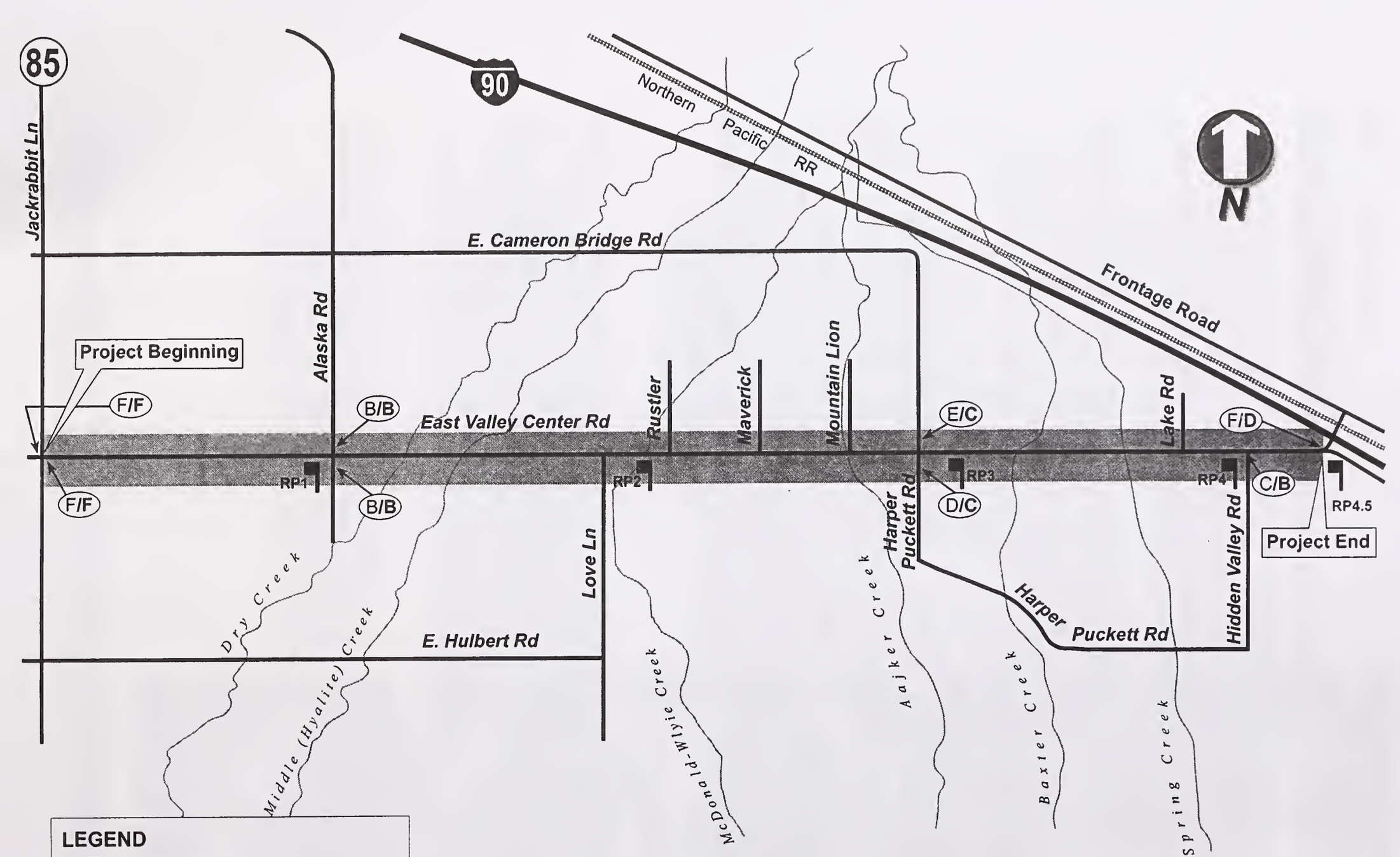
Year of Opening--2005: The traffic model shows that most of the intersections operate at LOS A or B in the morning and evening peak hours in the year of opening. The two exceptions are the Jackrabbit Lane intersection and the I-90 underpass intersection. Jackrabbit Lane/East Valley Center Road intersection, operates at LOS C during the morning and evening peak hours. The I-90 intersection operates at LOS D during the morning peak hour and LOS B during the evening peak hour.

Design Year--2025: An LOS analysis was conducted for each of the study intersections for the morning and evening peak hours. The LOS analysis shows that the Jackrabbit Lane intersection and the I-90 crossroad intersection will function poorly without signalized control. Without signalization, those intersections will be at LOS F for one or more movements in the design year 2025 (see **Figure 1-5**). With signal control, the Jackrabbit Lane intersection is projected to operate at LOS C in the AM peak hour and LOS C in the PM peak hour in the design year. Likewise, with signal control, the I-90 intersection will operate at LOS D in the AM peak hour and LOS C in the PM peak hour. At Harper Puckett Road, the southbound approach to the intersection will operate at LOS E in the AM peak and LOS C in the PM peak without signal control.

1.7 Traffic Safety

The accident history information provided by the MDT Traffic Satiety Division is for the time period of January 1, 1990, through December 31, 1999. The accident section covered is from RP 0.0 to RP 4.5 on East Valley Center Road. The study area's accident rate is 2.47 compared to a statewide average of 1.77. The severity rate, which is a product of the accident rate multiplied by a weighted severity index is 5.19 for the study area compared to a statewide average of 4.43. **Figure 1-6** illustrates the comparison of this roadway segment with the statewide average for both the accident rate and the severity rate.

In addition, the accidents related to icy road conditions are 42.9 percent of the total for the study area as compared to the statewide average of 18.5 percent. The intersection related accidents for the study area represent 38.1 percent of the total while the statewide average is 22.3 percent for rural secondary roads.

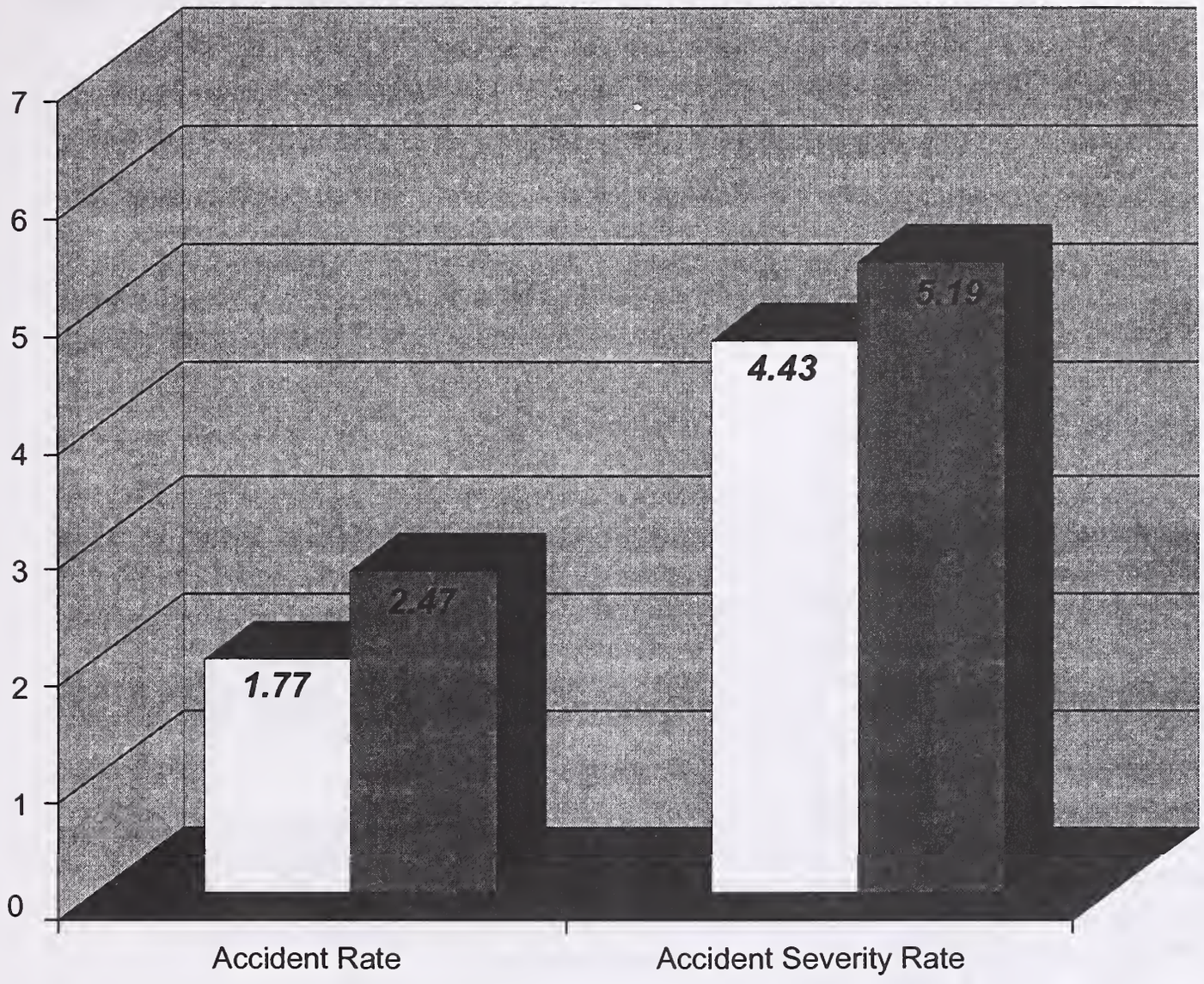


Junction MT-85 - East

Forecast Intersection Level of Service Year 2025 without Signal Control

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Forecast LOS.FH10

Figure 1-5



Period: January,1990 through December, 1999

Note: Accident rates are defined as the number of accidents per million vehicle miles.

Severity rate is defined as the accident rate multiplied by a weighted severity index.

Corridor Accident and Severity Rates

Figure 1-6

Also of interest are the statistics for type of accident by section of roadway. In the section from RP 0.0 to RP 3.2, 50 percent of the recorded accidents listed overturning as the first and most harmful event. In the section from RP 3.2 to RP 4.5, 65 percent of the recorded incidents were coded as intersection related. In general terms, in the first 4.8 kilometers (3 miles) of the roadway from the junction with MT 85 traveling east, the accident trend is single vehicle, off road, and overturning. In the last 2.4 kilometers (1.5 miles) of the roadway, at the east end, the trend shows multiple vehicle collisions involving turning movements. The higher number of intersection related accidents in this area could, in part, be due to vehicles slowing down to enter the subdivision roads and then being rear-ended.

1.8 Proposed Roadway

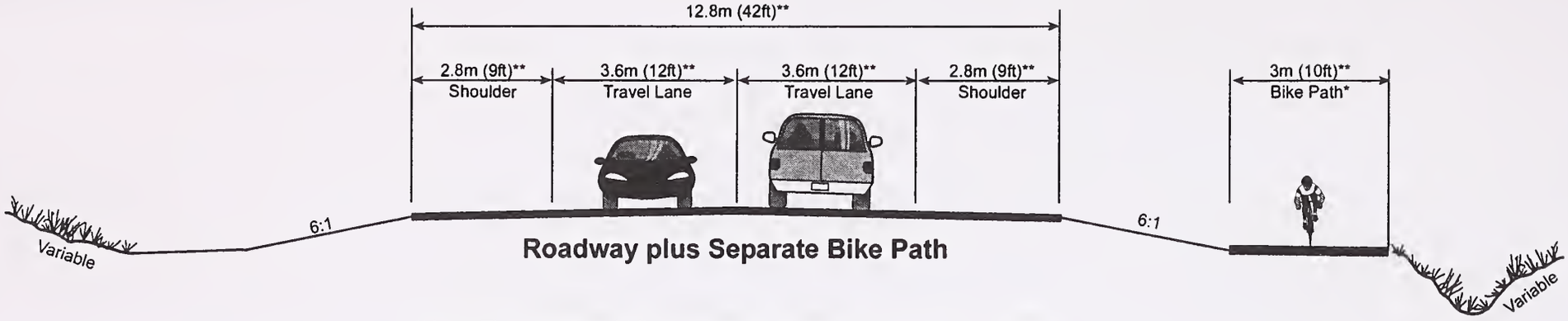
The proposed roadway will be a two-lane roadway with 3.6-meter (12-foot) travel lanes, and 2.4- to 2.8-meter (7.8- to 9-foot) shoulders. A clear zone will be provided in areas where the roadside development does not restrict the proposed cross section width. The roadway will have a curb and gutter treatment in the areas where the developed parcels require a narrower cross section. The vertical alignment will be flattened from its current hilly profile to a more even grade. This will provide greater sight distance and safety for the traveling public. The bridge at Middle (Hyalite) Creek will be replaced with a 16.0-meter (52-foot) wide structure with shoulders and guardrails.

A pedestrian/bike path is included in the design of the project. Where the path is adjacent to the roadway, it will be paved. Where the path is separated from the roadway, it will be graded so that it can be paved in the future by the County. The path will be separated from the roadway where right-of-way is sufficient, and in more constrained areas will be immediately adjacent to the curb.

Roadway signing will meet MDT standards and roadway lighting will be provided at major intersections.

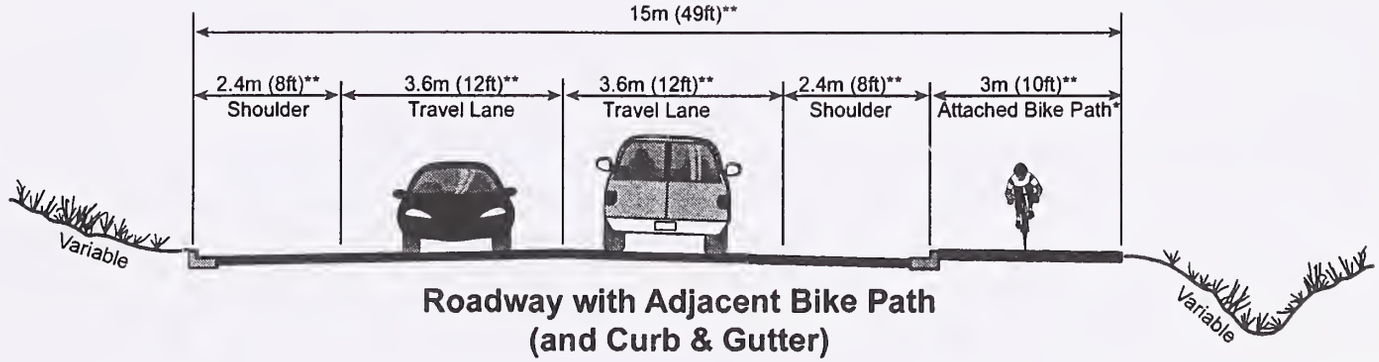
Specific proposed design features are discussed more fully in Chapter 2.0 of this document. Examples of typical cross sections proposed for the project are shown in **Figure 1-7**.

The proposed roadway widths would not comply with MDT's Geometric Design Standards if only evaluated based upon a weighted average of the Current Year Traffic. Based upon both the current and projected traffic for individual segments of the project, high growth potential, route continuity and public comments it was agreed to use Future Traffic volume to establish the roadway width.



Roadway plus Separate Bike Path

*Note: The separated bike path will be graded as part of the project.



Roadway with Adjacent Bike Path (and Curb & Gutter)

*Note: The attached sidewalk/bike path will be paved as part of the project.
**Note: Dimensions in feet rounded to the nearest foot.

CHAPTER 2.0: DESCRIPTION OF ALTERNATIVES

2.1 No-Action Alternative

This alternative is included as required by Paragraph 1502.14(d) of the CEQ Regulations (1986). It consists of leaving the existing roadway in its current condition. There would be no cost for construction or right-of-way acquisition for this alternative. There would be no physical disruption of the nearby terrain or traffic disruption due to construction.

As traffic increases on the roadway, additional delays would occur and traffic accidents would be expected to rise.

2.2 The Preferred Alternative

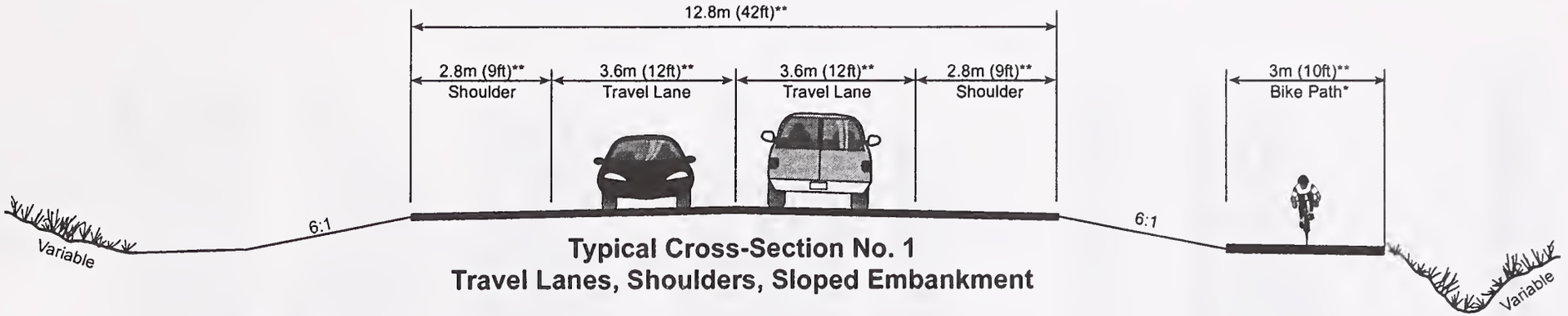
The description of the Preferred Alternative has been developed from preliminary design plans and specific features may change as final design plans are developed.

The Preferred Alternative includes the complete reconstruction of the existing East Valley Center Road from the junction at MT 85 (Jackrabbit Lane), on the west to the underpass at I-90 on the east. The roadway has several deficiencies that need correction including vertical alignment, pavement width and structure, bridge structure, and roadside embankments. The design of the preferred alternative would follow current MDT guidelines and standards for secondary roads.

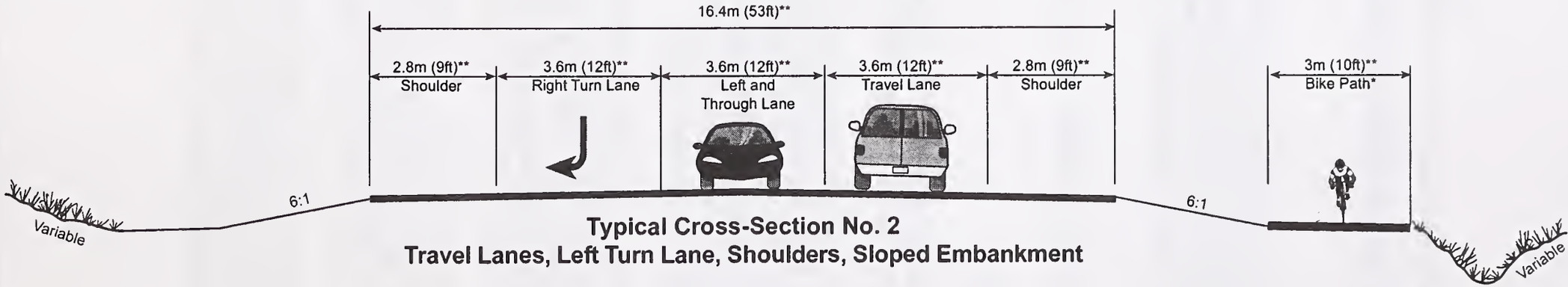
The Preferred Alternative will include two travel lanes (one in each direction), paved shoulders, sloped embankments or curb and gutter treatment at the edge of pavement, and a pedestrian/bike path along the south side of the roadway. The pedestrian/bike path will be graded as part of this project, and where attached to the roadway, will also be paved. Future paving of the entire path will be completed by the County.

There are several typical cross sections proposed for this roadway project which respond to the varying conditions along the 7.3-kilometer (4.5-mile) length. These typical cross sections are illustrated in **Figure 2-1** and **Figure 2-2**. The locations where the cross sections are proposed to be applied are shown in **Figure 2-3**.

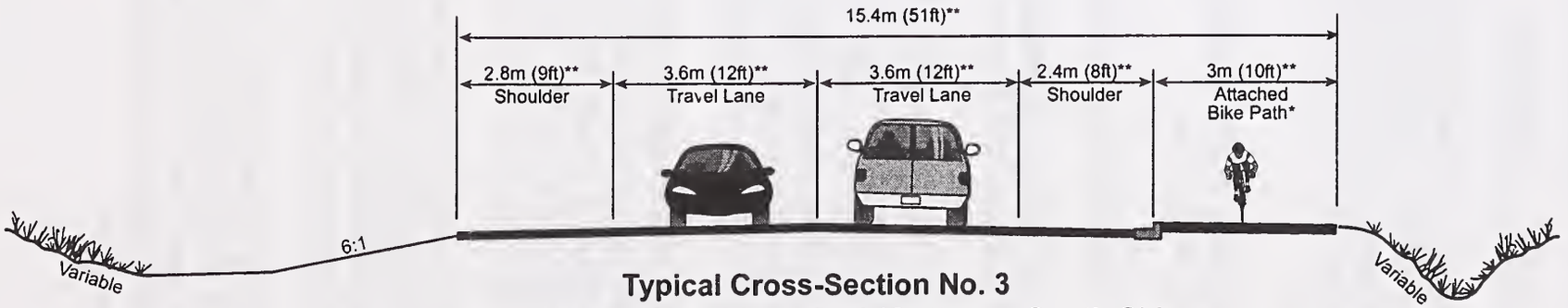
At the west end of the project, where the right-of-way along the road is less developed and primarily in agricultural use, the typical cross sections 1 and 2 will be utilized. This includes the area from RP 0.0 to approximately RP 2.1 or from the junction of East Valley Center Road with MT-85 (Jackrabbit Lane) at the west end of the project, to just east of Love Lane.



Typical Cross-Section No. 1
Travel Lanes, Shoulders, Sloped Embankment

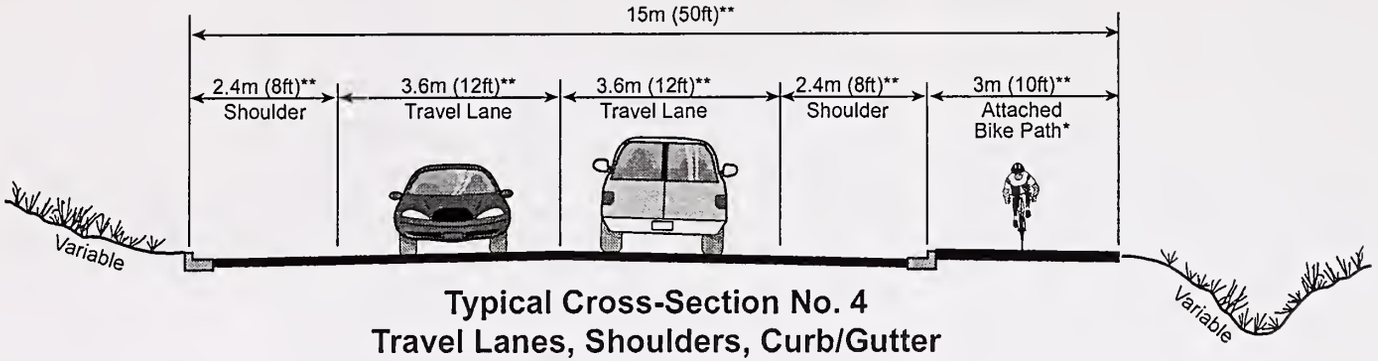


Typical Cross-Section No. 2
Travel Lanes, Left Turn Lane, Shoulders, Sloped Embankment

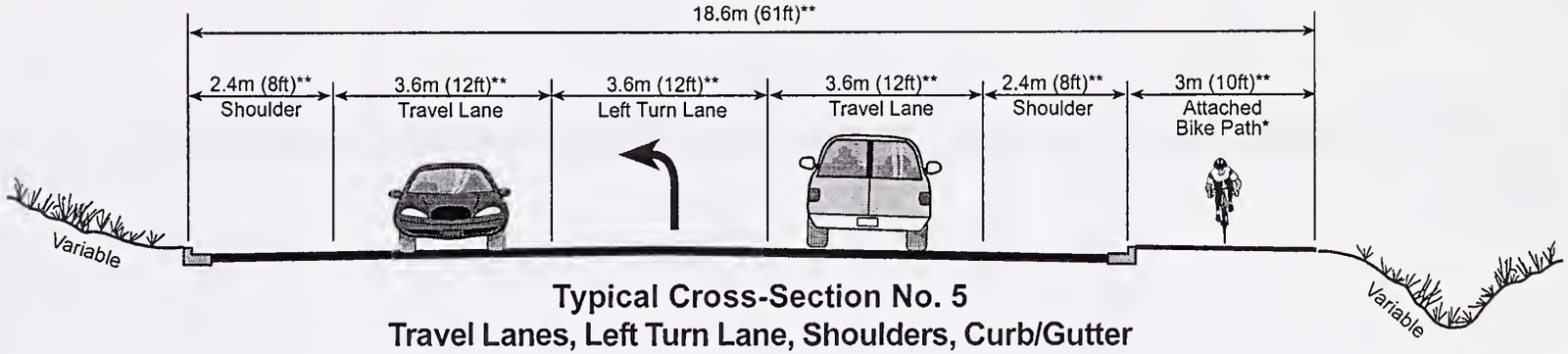


Typical Cross-Section No. 3
Travel Lanes, Shoulders, Curb/Gutter on South Side

*Note: The bike path will be graded. Where attached, it will also be paved.
**Note: Dimensions in feet rounded to the nearest foot.

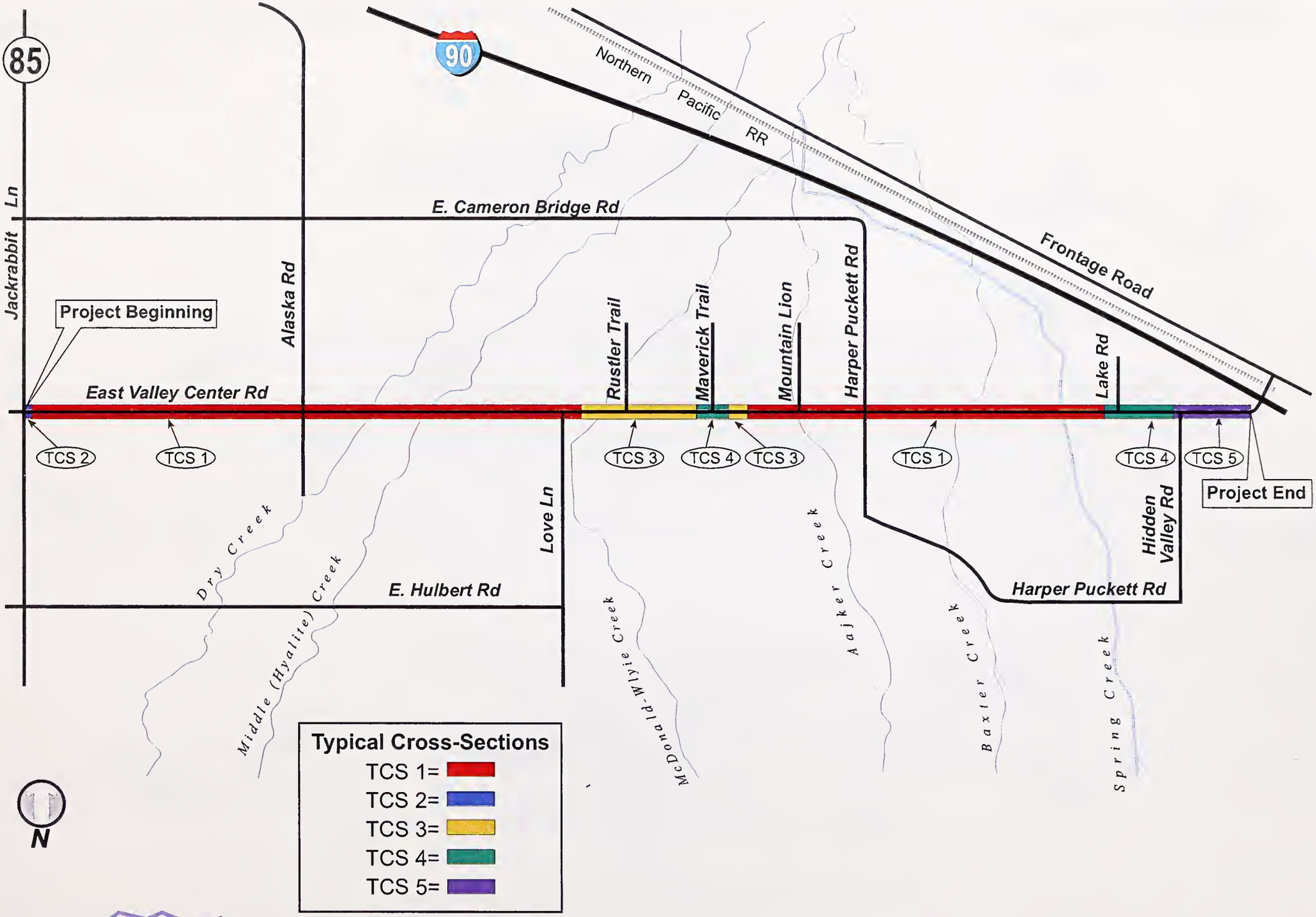


Typical Cross-Section No. 4
Travel Lanes, Shoulders, Curb/Gutter



Typical Cross-Section No. 5
Travel Lanes, Left Turn Lane, Shoulders, Curb/Gutter

*Note: The bike path will be graded. Where attached, it will also be paved.
**Note: Dimensions in feet rounded to the nearest foot.



Junction MT 85 - East

Typical Cross-Section Locations

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Typ X_Section Loca.FH10 (2/2002)

Figure 2-3

These cross sections include two 3.6-meter (12-foot) travel lanes and a 2.4-meter (8-foot) paved shoulder with 0.4 meter (1.3 feet) of additional width for future overlay on either side of the road, along with a 6:1 slope on the embankment. Along the south side of the road a pedestrian/bike path would be located approximately 3.2 meters (10.5 feet) from the edge of pavement and would be 3 meters (9.8 feet) wide. Typical cross section number 2 includes the addition of a right turn lane to the profile already described for cross section number 1. The right turn lane would be used at the intersection of East Valley Center Road and Jackrabbit Lane (MT-85).

The bridge at Middle (Hyalite) Creek will be replaced with a single-span structure 13 meters (43 feet) in length and 16.0 meters (52 feet) in width. The bridge will be a rolled steel girder construction with cast-in-place concrete deck. The abutments will be cast-in-place concrete stub abutments with steel pile foundations. Based on the recommendations of the hydraulics report, the embankment slope will be 2:1 with riprap treatment. The bridge will also feature a sidewalk constructed along its south side.

In the area from just east of Love Lane to a point east of Maverick Trail Road, typical section numbers 3 and 4 would be utilized. This area includes the frontage of the Wylie Creek subdivision where the roadway is adjacent to the landscaped berm park located on the south side of the road. Along the landscaped berm area, the roadway improvement would include a curb and gutter treatment on the south side with the pedestrian/bike path located adjacent to the curb in a sidewalk configuration. The north side of the roadway would continue in the same treatment as in typical cross sections 1 and 2 except for a short piece near the entrance to the subdivisions at Wylie Creek Boulevard and Maverick Trail, where both sides of the road would have curb and gutter treatment. These cross section treatments have been developed for this area in order to minimize the impact to the Wylie Creek subdivision landscaped berm park along the south side of the roadway. However, some right-of-way will be required from this park and construction disturbance will occur. The project will include restoration of the landscaped area after construction. In order to reduce the vertical curve that exists in this area, the elevation of the roadway between Rustler Trail and Maverick Trail will be raised approximately 1 to 2 meters (3 to 6 feet) above its current alignment.

To the east of the Wylie Creek subdivision, between Maverick Trail and Mountain Lion Trail, the proposed roadway improvement will transition back to the typical cross section 1 profile that was used on the west end of the project. This cross section treatment will continue to be used from this location, eastward, to a location just west of Lake Road. From Lake Road on to Hidden Valley Road, the typical cross section 4 will be used which include a curb and gutter treatment on both sides of the road with the pedestrian/bike path immediately adjacent to the pavement edge in a sidewalk configuration. This is the narrowest of the proposed cross sections and has been developed for this more constrained area. Typical cross section number 5 includes a left-turn lane and will be used from Hidden Valley Road to the I-90 underpass.

Throughout the project length, the elevation of the roadway will be altered in order to reduce the vertical curves in the alignment that now exists. In most areas the elevation changes would not be more than 0.3 meter (1.0 foot). However, in the vicinity of the Wylie Creek Subdivision, the elevation alteration will be between 1 and 2 meters (3 and 6 feet) due to the existing topography.

CHAPTER 3.0: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

3.1 Existing and Future Land Use

3.1.1 AFFECTED ENVIRONMENT

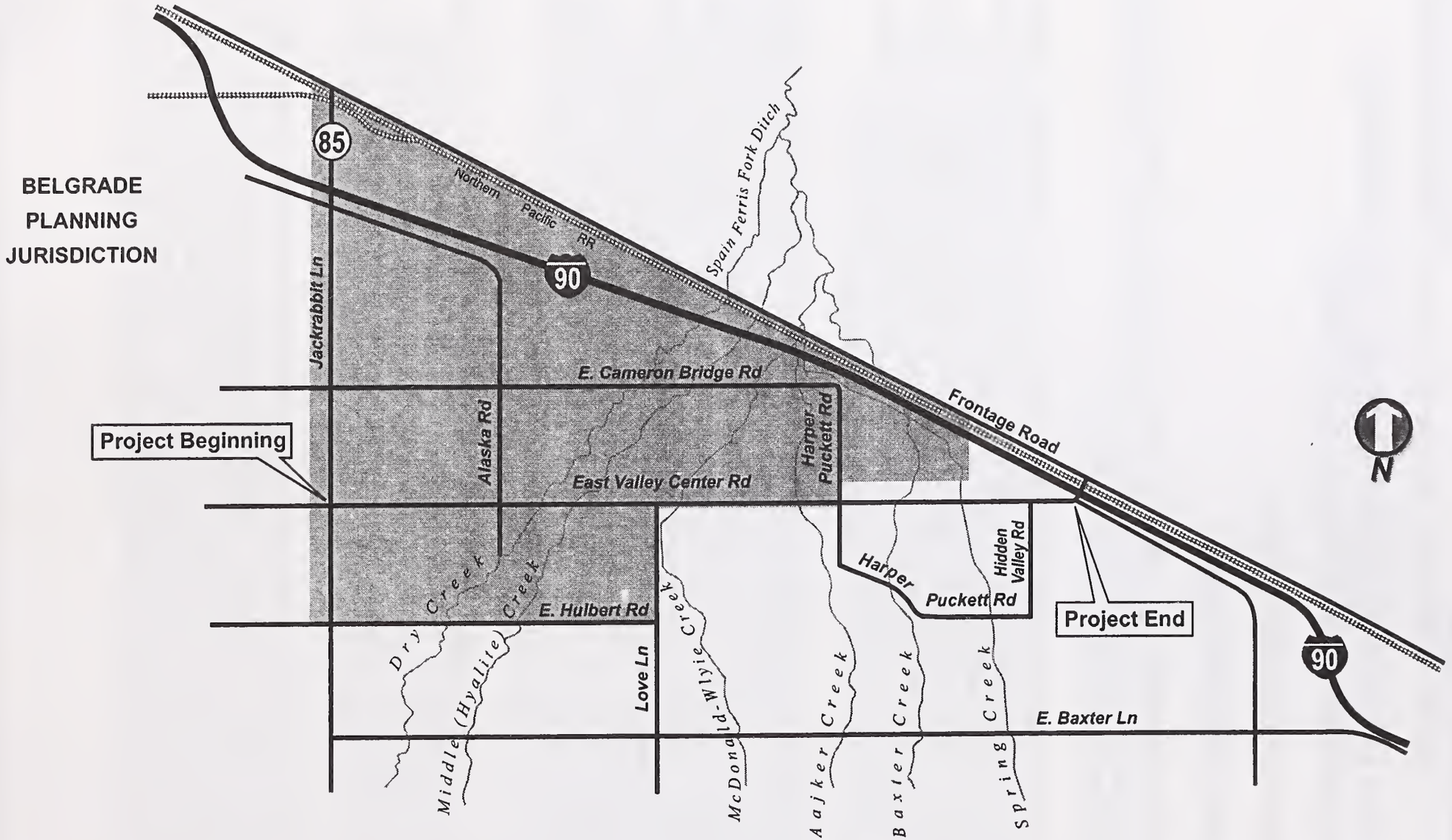
The land along the corridor is undergoing change. The area, once mostly farmland, is rapidly developing into single-family housing. The development is spreading from the I-90 interchange westward into agricultural lands.

The area is zoned as an Agriculture Suburban District (A-S) by the *Gallatin County Plan*. This zoning designation mixes agricultural uses with suburban residential uses, and requires a low density of buildings in a development and on parcels in new subdivisions. There are some conditional uses allowed in the A-S district, but these are low-density commercial uses consistent with the rural residential character of the district. These include daycare centers, recreational facilities and clubs, veterinary services, and schools. None of these uses are currently present, however.

The City of Belgrade has a planning jurisdiction of 6.4 kilometers (4 miles) outside the city limits, and a 1.6-kilometer (1-mile) zoning jurisdiction. Therefore, the planning district covers the west end of the study area, from Jackrabbit Lane to east of Harper Puckett Road, and there is no specific zoning for this portion of the study area (see **Figure 3-1)**. Accordingly, any new subdivision in the area would have to be approved by the City's planning department, as well as the County's. The only definitive developments in the near future are the final phases of the Wiley Creek and Valley Grove subdivisions, which have already been approved and are under construction. There has been interest in a minor subdivision near Jackrabbit Lane; however, there has been no formal application as yet.

The Bozeman planning jurisdiction covers the east end of the study area, from I-90 to just west of Hidden Valley Road. According to the plan, the land in this planning jurisdiction outside of the city limits is almost exclusively planned for low-density residential and agricultural uses. Bozeman's planning document titled *Bozeman 2020 Community Plan* (March 2001) guides development in this portion of the project.

Another tool to direct future land use is the *Gallatin County Growth Policy*, a 1993 document (amended in 1998 and 1999) which establishes a series of long-range goals and strategies to help guide future growth and land development within the county. A principle purpose of the *Growth Policy* is to ensure that growth and development occur in a coordinated, logical and cost-effective manner. Another principle purpose of the *Growth Policy* is to provide an overall framework for decision-making on growth and



Junction MT-85 - East

City of Belgrade Planning Jurisdiction

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Belgrade Jurisdiction.FH10 (2/2002)

Figure 3-1

development issues, and in accordance; the County's goals to direct these decisions are as follows:

- Promote public health, safety, convenience and welfare
- Conserve Prime Agricultural lands
- Conserve and protect the environment
- Provide for orderly development
- Provide for compatible uses
- Provide for efficient delivery of public services
- Respect private property rights (Chapter 1.0, page 1-1)

With regard to land use specifically, the Growth Policy aims to increase urban populations, and reduce rural land consumption through the promotion of urban and suburban density development in and around city and town cores, cluster development with minimal land removed from agricultural or forestry production, and the compatible infill of vacant land. In order to achieve these goals, a featured tool of the Growth Policy is the Growth-Conservation Areas Program (G-CAP). G-CAP is intended to direct growth to selected areas, thereby meeting the desires of county residents for controlled optimal growth, while maintaining important open space and environmental habitats. Under G-CAP, land within the county is placed in one of four categories: Growth Areas, Secondary Growth Areas, Rural Areas and Conservation Areas. While development may occur in any of these areas, weighted incentives are used to favor Growth Areas and decrease proportionally as development locates to the other three areas. Development of land within the Growth Areas has no conservation requirement, and development of Secondary Growth Areas, Rural Areas, and Conservation Areas requires an increasing proportionate preservation of land. The study area does not abut or contain any conservation areas; therefore, the current type of development, low-density suburban housing, can be expected to continue in the study area.

3.1.2 IMPACTS

No-Action Alternative. No existing or planned uses would be displaced or altered by the No-Action Alternative. The present land use and development growth could continue; however, the No-Action Alternative will not improve accessibility for current and future residents along the corridor, and a continued decrease in traffic mobility would occur.

Preferred Alternative: The Preferred Alternative will not likely induce unplanned land use changes or promote unplanned growth. The Preferred Alternative will improve safety and access for current and future development and uses along the corridor, in accordance with adopted current and future land use plans.

3.1.3 MITIGATION

Since any future development projects along the corridor must first be approved by the County and appropriate city, the local planning process will ensure that projects conform to adopted local plans. Therefore, mitigation of land use impacts is not required.

3.2 FARMLAND

3.2.1 AFFECTED ENVIRONMENT

The U.S. Department of Agriculture (USDA) defines Prime Farmland as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique farmland is described as land other than Prime Farmland that is used for the production of specific high value food and fiber crops. Farmland of Statewide and Local Importance is defined as land which is being used for or has the potential for the production of food, feed, fiber, forage, and oilseed crops, but has not been identified as being Prime or Unique.

The USDA Natural Resources Conservation soil survey maps and soil descriptions were collected for the project area. Coordination with the Gallatin Conservation District in Bozeman, Montana was conducted to determine the type of soils that are considered to be Prime and Unique or of Statewide or Local Importance. Through evaluation of Soil Surveys, the NRCS determined that there are 35.6 hectares (88 acres) of Prime and Unique Farmland and 6.8 hectares (17 acres) of Statewide and Local Important Farmland within the study area. **Table 3-1** lists all of the soil types found within the study area.

Table 3-1
Soil Units Found within the Study Area

Symbol	Soil Type	Approximate Acres	Approximate Hectares
41A	Beaverell Loam, 0 to 2 percent slopes	4.3	1.7
43A	Beavwan loam, 0 to 2 percent slopes	4.7	1.9
241A	Beaverell Cobbly Loam, 0 to 2 percent slopes	16.3	6.6
249A	Beaverton Cobbly Clay Loam, 0 to 2 percent slopes	8.3	3.4
307A	Sudworth silty clay loam, 0 to 2 percent slopes	11.0	4.5
341A	Beaverell-Beavwam Loams, 0 to 2 percent slopes	13.3	5.4
443A	Beavwam Loam, 0 to 2 percent slopes	6.8	2.8
448A	Hyalite-Beaverton Complex, 0 to 2 percent slopes	9.6	3.9
453C	Amsterdam-Quagle silt loams, 4 to 8 percent slopes	0.04	0.02
457A	Turner loam, 0 to 2 percent slopes	7.4	3.0
509B	Enbar Loam, 0 to 4 percent slopes	8.1	3.3

Table 3-1 (continued)
Soil Units Found within the Study Area

Symbol	Soil Type	Approximate Acres	Approximate Hectares
50B	Blackdog silt loam, 0 to 4 percent slopes	5.6	2.3
53B	Amsterdam silt loam, 0 to 4 percent slopes	18.7	7.6
53C	Amsterdam silt loam, 4 to 8 percent slopes	12.4	5.0
57B	Turner loam, 0 to 4 percent slopes	37.1	15.0
	Total	**166.5**	**67.5**

Source: U.S. Department of Agriculture, Natural Resources Conservation Service

3.2.2 IMPACTS

Direct farmland impacts result from removal of cultivated lands by placement of impervious (paved) surface, cut and fill slopes and/or acquisition of right-of-way.

No-Action Alternative. The No-Action Alternative would have no impacts to Prime Farmland or Farmland of Statewide Importance in the study area.

Preferred Alternative. The direct and indirect impacts for the Preferred Alternative would effect both Prime and Unique farmland and farmland of Statewide and local importance. Farm operations would experience minor impacts resulting from acquisition of a small portion of their properties. Access would not be impacted, nor would long-term farm operations.

Coordination with the NRCS resulting in completion of a "Form AD-1006: Farmland Conversion Impact Rating" is included in Appendix A of this document. The total score for this project is below the threshold of 260 points.

3.2.3 MITIGATION

No mitigation is required by the NRCS for prime farmland impacts, since the score was less than 260 points on Form AD-1006. Therefore, no significant impacts to farmland will occur. All irrigation pipes and ditches still in use will be replaced in kind. Property owners will be compensated for crop damage if appropriate.

3.3 RIGHT-OF-WAY, RELOCATION AND UTILITIES

3.3.1 AFFECTED ENVIRONMENT

The width of the existing public right-of-way varies from approximately 18 meters (60 feet) to 27.5 meters (90 feet). There are approximately 14 hectares (35 acres) of existing public right-of-way within the project corridor.

3.3.2 IMPACTS

No-Action Alternative: The No-Action Alternative would require no new right-of-way, easements, construction permits or relocations.

Preferred Alternative: MDT owns part of the right-of-way required for the construction of the Preferred Alternative; however, acquisition of approximately 16 hectares (39.6 acres) of additional right-of-way by MDT would be required.

Ninety-eight parcels have been identified in the project area that are likely to require some right-of-way acquisition. A maximum of 98 property owners would be affected by this acquisition. This information is preliminary and may be refined during final design and/or when more detailed right-of-way information is available.

No relocation of businesses will be required by the Preferred Alternative. One residential relocation will occur due to the project.

Utility relocations would be required by the Preferred Alternative. These include power lines, telephone lines, fiber optic cable lines and underground gas lines.

3.3.3 MITIGATION

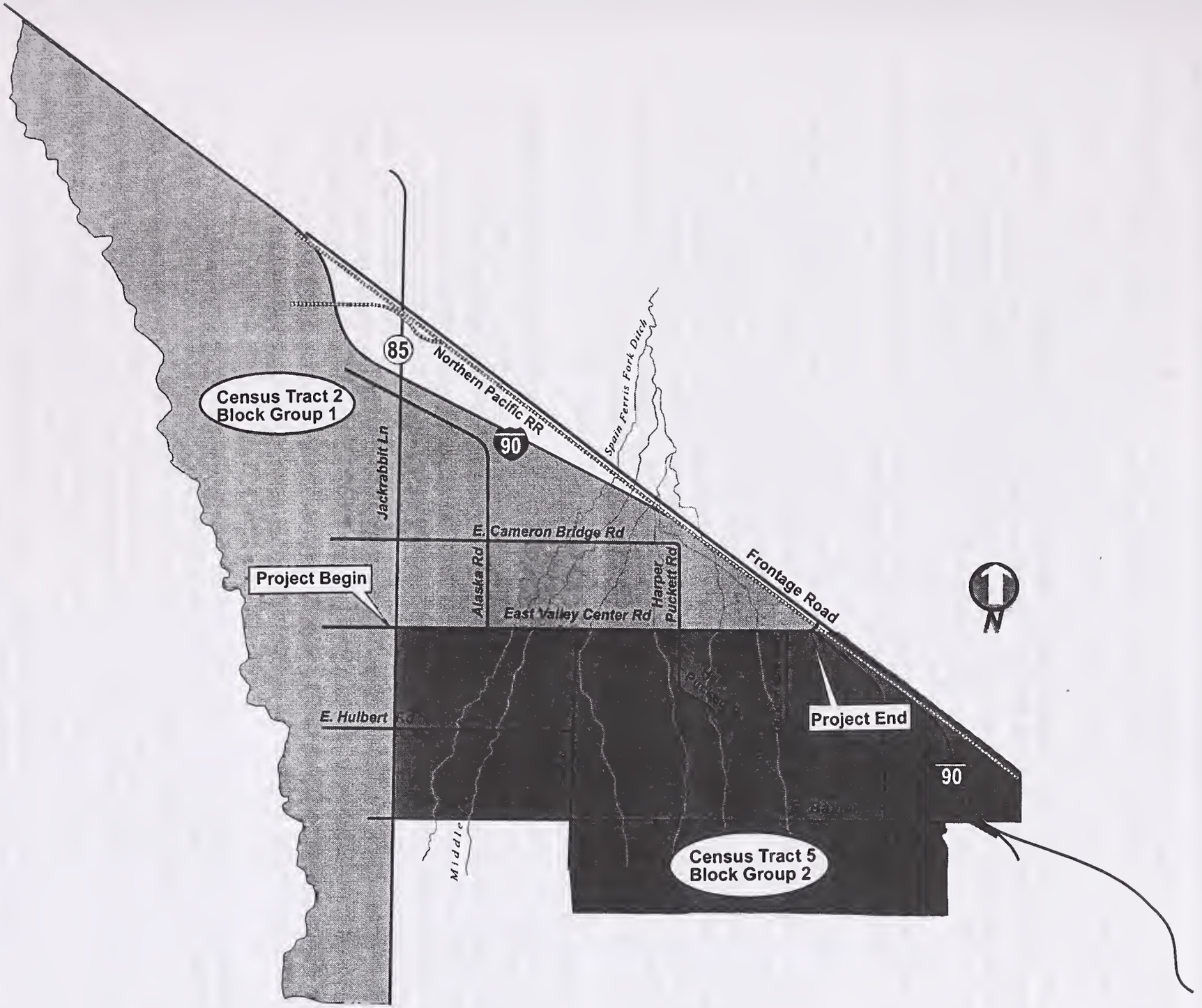
The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both the landowners and taxpaying public. Landowners affected are entitled to receive fair market value for any land or buildings acquired and any damages to remaining land due to the effects of highway construction. This action will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646 as amended), (42 U.S.C. 4601, et. seq.) and the Uniform Relocations Act Amendments of 1987 (P.L. 100-17). The accepted method of determining these payments is through the appraisal process. Once an appraisal is completed, reviewed, and approved, a monetary offer is made for land and improvements needed to be acquired for construction. This offer is discussed with the landowner and the necessary negotiations are conducted before completing the agreement to transfer the land to the highway right-of-way.

3.4 SOCIAL

3.4.1 AFFECTED ENVIRONMENT

Population Characteristics

Between 1990 and 2000 the population of Gallatin County grew 34.4 percent to 67,831. For this report the study area was determined to include Census Tract 2, Block Group 1 on the north side of the project corridor, and Census Tract 5, Block Group 2 on the south side of the project corridor (see **Figure 3-2**). This Census 2000 geographic area



Junction MT-85 - East

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\CensusBlock.FH9 (2/2002)

Census Block Groups

Figure 3-2

allows comparison to the 1990 Census geography (Census Tract 9860, Block Group 2, and Census Tract 9857, Block Group 4) because they both cover approximately the same area.

According to the 2000 Census data, the median age of the population for the study area is 30.4 years. Of the 2,310 households in the two census block groups that border the project corridor, 10.3 percent contain people over the age of 65, compared to 14.8 percent for Gallatin County and 23.4 percent for Montana. Of those 2,310 households, 40.1 percent contain people under the age of 18, compared to 30.9 percent for Gallatin County and 33.3 percent for Montana. The average household size is 2.70 people and the average family size is 3.06 people in the study area.

According to the U.S. Census Bureau's Census 2000 data, there are very few people of racial minorities or Hispanic or Latino people living in the study area. Of the 6,242 people in the study area, 3.2 percent are of any racial minority, and 1.4 percent is Hispanic or Latino. The racial minority population is 3.8 percent of Gallatin County's total population, and 9.4 percent of Montana's total population. The Hispanic or Latino population is 1.5 percent of Gallatin County's total population, and 2.0 percent of Montana's total population. Generally, these minority populations live at the east end of the study area; however, not in any specific neighborhoods or blocks.

Community Facilities

The schools for the area are located to the north in the Belgrade Elementary and High School Districts for people living at the west end of the study area, or to the south in the Bozeman Elementary and High School Districts for people living at the east end. Shopping centers are located outside the study area in Belgrade or Bozeman, the closest one being the North 19th Avenue area. School buses do pick up and drop off students along East Valley Center Road. The closest hospital is located in Bozeman, while Belgrade has one community clinic. There are no churches within the study area. The project lies within the Belgrade Fire Service Area. The Bobcat Transit System's Gold Commuter Route travels between Belgrade and Bozeman, on Jackrabbit Lane at the west end of the project.

Housing

Comparing the housing unit counts between the 1990 and 2000 Census, in the area north of the project corridor the number of housing units increased by 234 percent to 856 units, and in the area south of the project corridor the number of housing units increased by 120 percent to 1,621 units. Very few of the homes in the study area are vacant or renter-occupied, according the U.S. Census Bureau's Census 2000 data. Only two percent of the homes are vacant. The home ownership rate in the study area is over 90 percent compared to 62.4 percent for Gallatin County. Most of the homes are single-family units and are occupied year round.

3.4.2 IMPACTS

No-Action Alternative. The No-Action Alternative would not alter the area population growth or other demographic characteristics or trends. There would be no impacts to neighborhoods, communities, schools, churches, and ethnic or minority groups. Road and traffic conditions would continue to deteriorate. The No-Action Alternative will not result in any short-term construction related impacts. The No-Action Alternative will not improve accessibility and safety concerns along the highway.

Preferred Alternative. During construction of the Preferred Alternative, there will be short-term impacts to residents within the study area. Residents could experience increases in noise levels, traffic congestion and air pollution (dust) from construction. The Preferred Alternative will provide benefits to the surrounding residents through safer traveling conditions by roadway widening and improvements to shoulders and turnouts. School bus loading/unloading will be safer with shoulders along the roadway. A bicycle lane is proposed along the roadway. It will be graded as part of this project and, where attached, will also be paved. Future paving of the entire path will be done by the County. The path will enhance bicycle safety and mobility through the area. Implementation of the Preferred Alternative would not alter the area population growth or other demographic characteristics or trends. There would be no impacts to neighborhoods, communities, schools, churches, and ethnic or minority groups.

3.4.3 MITIGATION

Mitigation measures that could minimize construction related impacts include public service announcements alerting the public to activity schedules and traffic delays, flaggers, and construction signage. Coordination with emergency service providers will include notification of detours. Mitigation for short-term increases in noise levels, traffic congestion, and air pollution (dust) due to construction activities is addressed in Section 3.20-Construction.

3.5 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, signed on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and/or adverse effects of federal projects on the health or environment of minority and low-income populations, and minority-owned businesses to the greatest extent practical and permitted by law.

According to the U.S. Census Bureau's Census 2000 data, there are very few people of racial minorities or Hispanic or Latino people living in the study area. Of the 6,242 people in the study area, 3.2 percent are of any racial minority, and 1.4 percent are Hispanic or Latino. The racial minority population is 3.8 percent of Gallatin County's total population, and 9.4 percent of Montana's total population. The Hispanic or Latino

population is 1.5 percent of Gallatin County's total population, and 2.0 percent of Montana's total population. Generally, these minority populations live at the east end of the study area; however, not in any specific neighborhoods or blocks.

Based on the Census Bureau's 2000 data, 7.6 percent of the population of the study area is below the poverty level. This is much lower than the rates for Montana at 14.6 percent and Gallatin County at 12.8 percent. Of the 2,310 households in the two census block groups that border the project corridor, 10.3 percent contain people over the age of 65, compared to 14.8 percent for Gallatin County and 23.4 percent for Montana. Of those 2,310 households, 7.2 percent are headed by single parents with children under the age of 18, compared to 6.4 percent of total households in Gallatin County and 9.0 percent of total households in Montana. Of the 6,242 people in the study area, 3.2 percent are of any racial minority, and 1.4 percent are Hispanic or Latino. The racial minority population is 3.8 percent of Gallatin County's total population, and 9.4 percent of Montana's total population. The Hispanic or Latino population is 1.5 percent of Gallatin County's total population, and 2.0 percent of Montana's total population.

The data for these populations within the study area are generally about the same or lower than the data for Gallatin County and Montana. The population of concern of environmental justice is within the eastern end of the study area. The project improvements on the east end of the roadway include a curb and gutter cross section with an option for a bike path along the south side. This profile is constrained in width in order to minimize impacts to existing development. The project will not require relocation of housing or result in disproportionately high or adverse effects on minority or low-income populations.

Based on the above discussion, the Preferred Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations as discussed in EO 12898 regarding environmental justice.

3.6 Economic

3.6.1 AFFECTED ENVIRONMENT

The proposed project is located within unincorporated Gallatin County with portions of the roadway within the planning jurisdictions of Belgrade and Bozeman. Located in southwestern Montana, Gallatin County is the fifth most populous county in the state with about 68,000 residents. The largest city in Gallatin County is Bozeman with a population of approximately 28,000. Belgrade is the second largest city with a population of approximately 5,800. Average annual employment in the county increased by 56 percent between 1990 and 2000. Population in the county during this same period grew by 34 percent. Due to this growth in jobs, the preliminary unemployment rate in December 2001 was 2.9 percent considerably below the state average of 4.9 percent.

Per capita income for the county in 1999 was $24,017, while the state per capita income was $21,997. The three sectors that contribute the largest amount to personal income in Gallatin County are non-labor, service, and government. The sectors of agriculture and resource extraction provide the least amount of personal income. The non-labor sector includes retirement income, benefits, dividends, investment income, income through property ownership and rental, disability, and unemployment. This sector accounted for 35 percent of total personal income, while services provided 26 percent and government 15 percent. The fastest growing segment of the economy contributing to personal income is the financial services sector that grew by 215 percent between 1990 and 1999.

Outside the incorporated areas of Gallatin County, the land use is primarily agricultural. In 1997 there were 835 working farms in the county. The average farm size was 368 hectares (910 acres), with a median size of 65 hectares (161 acres), or one-quarter section of land. In the time period between 1982 and 1997, the number of farms of less than 19.8 hectares (49 acres) increased by 31 percent, while the number between 20 hectares and 405 hectares (50 acres and 1,000 acres) decreased by 8.5 percent. The most common crops are wheat and barley. The most common livestock raised are cattle, horses, and sheep.

Along the corridor for East Valley Center Road, the primary development is residential or agricultural. Subdivisions have been constructed in recent years, converting some agricultural land to housing uses. The remaining agricultural land is in irrigated crop production. There are no retail or commercial developments along the corridor.

3.6.2 IMPACTS AND MITIGATION

No-Action Alternative. The No-Action Alternative would have no impact on economic conditions.

Preferred Alternative. The Preferred Alternative would have little effect on existing economic conditions within the study area, as there are no commercial, retail or other businesses along the corridor. However, construction of the roadway would lead to a short-term increase in the number of construction jobs in the area and would add to personal income levels for these workers. The Preferred Alternative is not expected to induce long-term economic growth or result in any changes in zoning for commercial development. Therefore, no mitigation is required.

3.7 VISUAL

3.7.1 AFFECTED ENVIRONMENT

East Valley Center Road between MT 85 and State Highway 235 contains relatively broad vistas with distant views to the Tobacco Root Mountains to the west and the

Bridger Range of the Gallatin National Forest to the east. The roadway alignment and adjacent terrain is gently rolling for most of the project corridor. Travelers heading in either direction along East Valley Center Road are exposed to natural pastoral and agricultural fields adjacent to the roadway. The highway corridor runs adjacent to agricultural fields and a number of newer residential communities (see **Figure 3-3**).

Foreground landscape units are those that are immediately visible along the corridor. They are created and influenced by such factors as the type of adjacent land use, the width of the roadway, the roadway elements, and the character of the adjacent vegetation. Combining these factors provides the traveler with a general character or "feel" of open or closed views along the roadway. Foreground landscape units included within this study corridor are as follows:

- *Agricultural.* A fair amount of the adjacent land use is pasture/agricultural fields. Farming equipment and outbuildings can be seen directly from the roadway. These provide generally open views with little or no tree canopy.
- *Riparian Vegetation.* At a number of locations along the project corridor, mature cottonwood trees associated with several creeks and floodplains which cross the under the roadway provide a break in the otherwise open landscape.
- *Residential.* There are a number of residential developments along the corridor. Most have access to East Valley Center Road directly or by a collector street entering the neighborhood. Most of these neighborhoods are average to low density and associated landscaping provides some interest in the middle ground views.
- East Valley Center Road, a secondary route, contains roadway elements typical to this rural setting such as: grass-lined ditches, above ground utility lines, varied right-of-way or property fencing, no curb and gutter, and minimal signage.

3.7.2 IMPACTS

No-Action Alternative. There would be no visual impacts associated with the No-Action Alternative.

Preferred Alternative. Visual impacts associated with the Preferred Alternative would be both short term as well as long term. Short-term visual impacts include:

- Construction equipment and excavated material associated with construction in the staging areas.
- Dust and debris associated with construction activity.
- Traffic congestion associated with construction activity.
- Removal of vegetation

Photo 1
Residential Development

Photo 2
Agricultural Setting

Long-term visual impacts associated with the Preferred Alternative include:

- An expanded pavement width to include wider shoulders and possibly an area for bicyclists and pedestrians.
- Cut and fill slopes, which would change the existing landscape character immediately adjacent to the roadway.
- Loss of mature cottonwood trees and vegetation in the clear zone.
- Replaced bridges, ROW fencing, relocated irrigation ditches, and a pedestrian/bicyclist path.
- Possibility of future signalized intersections with light standards.

The expanded pavement width would increase the motorist's foreground view of the roadway from that provided by the existing road. There would be an increase in pavement width from approximately 7.1 meters (23.2 feet) to a range of 12.8 to 15.4 meters (42 to 51 feet), except at the major intersections where a right- or a left-turn bay would increase the pavement width to a maximum of 18.6 meters (61 feet). This would be perceived as a minor difference in visual character with more extensive foreground views of pavement.

Minor visual changes could occur in areas where the expanded roadway requires reconfiguration of landform and grade due to cut and fill slopes, where turn bays are proposed and possible future signalized intersections.

The loss of mature trees and vegetation would occur primarily at drainage crossings and some residential areas.

3.7.3 MITIGATION

The vegetation areas impacted would be revegetated with native grasses and recommended seed mixes. The plant palette for revegetation would be derived from grass species existing in the corridor. Fences will be replaced in-kind according to landowner preference.

3.8 Historical and Cultural Resources

3.8.1 AFFECTED ENVIRONMENT

Pursuant to Section 106 of the National Historic Preservation Act (as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR part 800, a historical survey and literature review were completed for the vicinity of this project.

The Cultural Resource Inventory was completed by Renewable Technologies, Inc. (RTI) in January 2002. This report is an update to an earlier inventory of this corridor

completed by GCM Services, Inc in 1986. The 1986 survey listed a total of eight historic architectural sites in the project corridor, one of which was found to be eligible for the Nation Register of Historic Places. Three ineligible historic ditches were also recorded, along with two "historic loci" which were not National Register eligible.

The 2002 inventory, prepared by RTI, confirmed that no previously unrecorded historic resources existed within the survey corridor. This survey also revealed that ten of the 13 sites previously listed were still extant, in whole or in part. Sufficient information was gathered for each of these sites to allow for a re-evaluation of each property's eligibility for listing in the National Register of Historic Places. The results of the 1986 survey and the 2002 inventory work are summarized in **Table 3-2**.

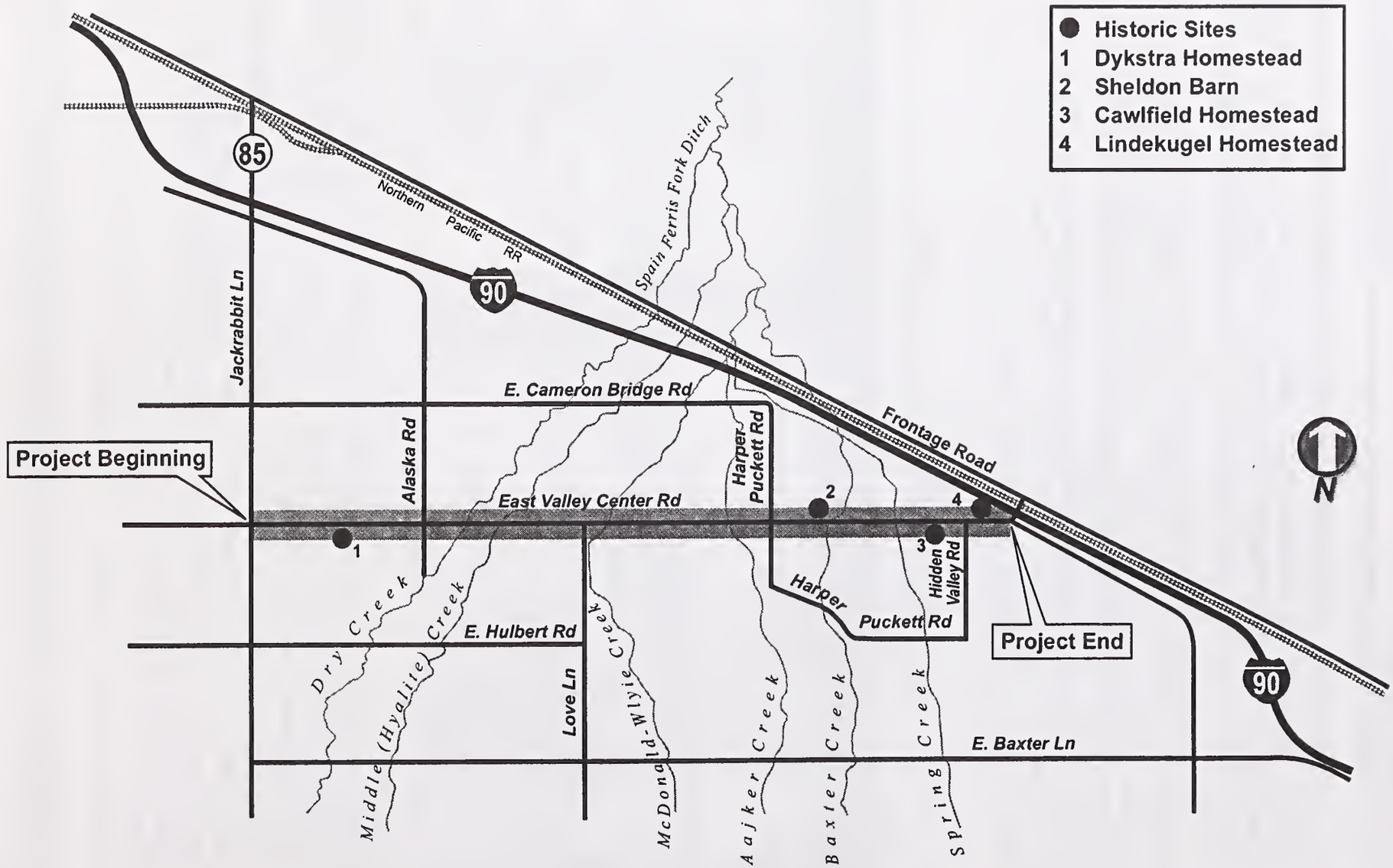
Table 3-2
1986 Survey and 2002 Inventory Summary

Site Number	Name	National Register Status (1986)	National Register Status (2002)
24GA728	Alward Homestead	Ineligible	Ineligible
24GA729	Dykstra Homestead	Ineligible	**ELIGIBLE**
24GA730	Sheldon Barn	Ineligible	**ELIGIBLE**
24GA731	Myers Barn	Ineligible	Ineligible
24GA732	Valley Center School	Ineligible	Ineligible
24GA733	Cawlfield Homestead	Ineligible	**ELIGIBLE**
24GA734	Lindekugel Homestead	**ELIGIBLE**	**ELIGIBLE**
24GA740	Marx House	Ineligible	Ineligible
24GA741	Mammoth Ditch	Ineligible	Ineligible
24GA742	Beck-Border Ditch	Ineligible	Ineligible
24GA743	Spain-Ferris Ditch	Ineligible	Ineligible
MAL #1	Site of the Waterman School	Ineligible	Ineligible
MAL #2	Historic Trash Dump	Ineligible	Ineligible

The 2002 inventory conducted by RTI found that a total of four properties are eligible for listing in the National Register of Historic Places. The three properties that were added to the list from 1986 were found to be eligible for the National Register of Historic Places with local significance under criterion "c". The two "historic loci" mentioned in the 1986 report were no longer evident. No historic roads or bridges were found to be within the project corridor. The locations of the four eligible historic properties are shown in **Figure 3-4** through **Figure 3-7**.

3.8.2 IMPACTS

No-Action Alternative. The No-Action Alternative would have no impact on historic properties.



Junction MT-85 - East

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Historic.FH10 (2/2002)

Historic Site Locations

Figure 3-4

100 0 100 200 Feet

50 0 50 Meters

N

Cultural Resources

(Dykstra Homestead)

Junction MT 85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\cultural.apr

Figure 3-5

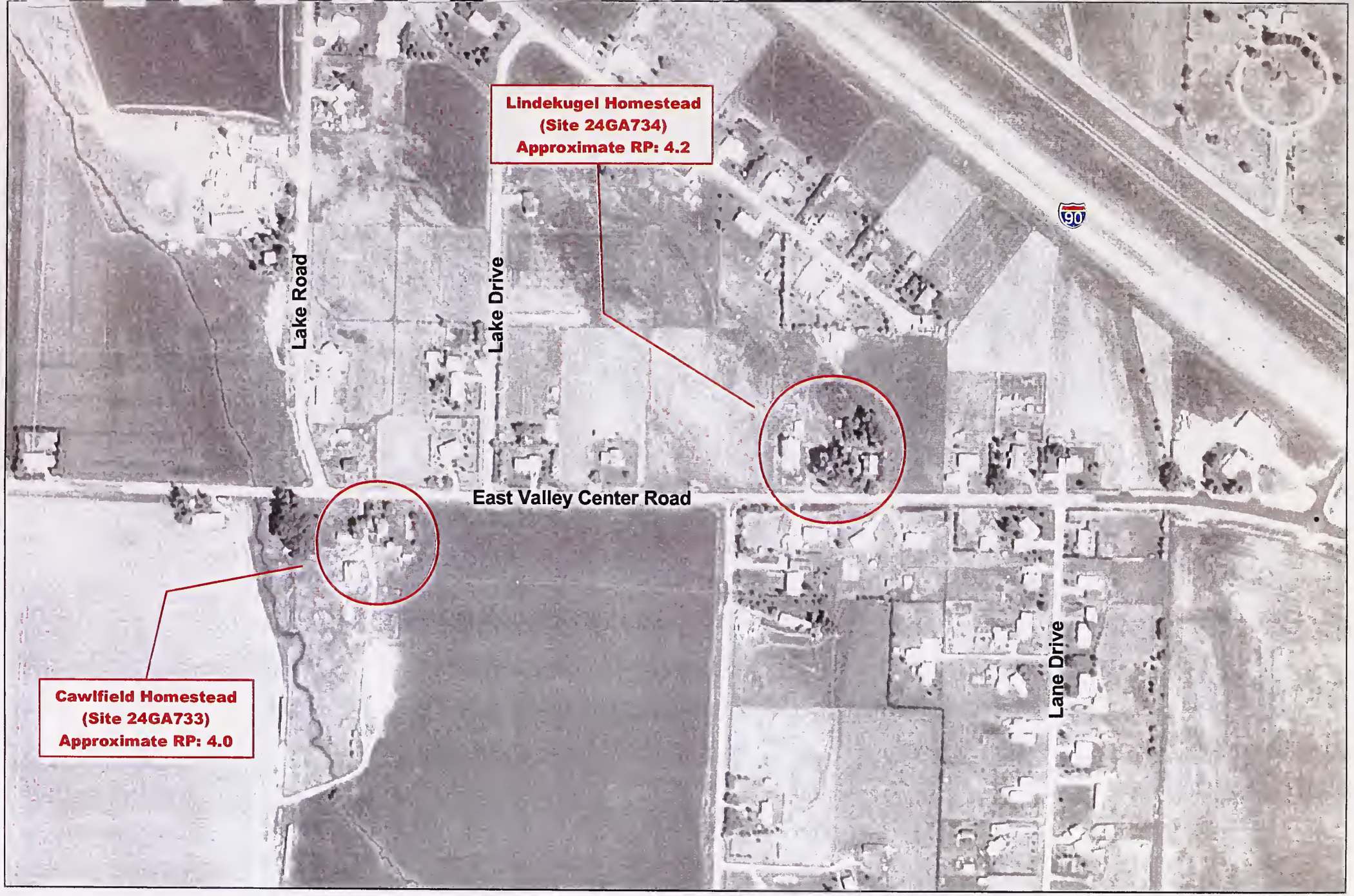
Cultural Resources

(Sheldon Barn)

Junction MT85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\cultural.apr

Figure 3.6



Cultural Resources

(Cawlfield and Lindekugel Homesteads)

Junction MT85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\cultural.apr

Figure 3-7

Preferred Alternative. Based on the preliminary design information, there will be impacts to the four eligible historic properties. Error! Not a valid bookmark self-reference. (page 3-26) lists the sites with an indication of the distance from the structure to the closest point of the proposed right-of-way.

Table 3-3
Impacted Sites and Buildings within the Study Area

Site Number	Name	Distance from the Nearest Structure to Proposed Right-Of-Way
24GA729	Dykstra Homestead	Approximately 6.7 meters (22 feet)
24GA730	Sheldon Barn	Approximately 1 meter (3 feet)
24GA733	Cawlfield Homestead	Approximately 7.5 meters (25 feet)
24GA734	Lindekugel Homestead	Approximately 7 meters (23 feet)

At the Dykstra, Cawlfield, and the Lindekugel Homesteads, it is likely that trees within five to 20 meters (16 to 65 feet) of the current centerline of the roadway would be removed or affected. Fences along the roadway will likely be removed.

Table 3-4 lists each site with the anticipated need for right-of-way acquisition based on preliminary design. The total site size is based on County Assessor's database for parcel mapping.

Table 3-4
Right-of-Way Acquisition

Site No.	Name	Total Site Size	Proposed Acquisition
24GA729	Dykstra Homestead	105 hectares (260 acres)	1.7 hectare (4.2 acres)
24GA730	Sheldon Barn	0.61 hectare (1.5 acres)	.09 hectare (.2 acre)
24GA733	Cawlfield Homestead	31.8 hectares (78.5 acres)	0.3 hectare (0.7 acre)
24GA734	Lindekugel Homestead	2.8 hectares (7.0 acres)	0.16 hectare (0.4 acre)

Based on preliminary design and following Section 106 guidelines, there will be "No Adverse Effect" to the eligible historic properties along the study area. Coordination with the State Historic Preservation Officer supports this conclusion. Correspondence from the SHPO is included in Appendix A.

3.8.3 MITIGATION

The State Historic Preservation Office (SHPO) has determined that this project will have No Adverse Effect on these historic properties along the corridor.

Property acquisition, if needed, at these sites will be done in conformance with all applicable State and Federal guidelines. Fencing will be replaced in-kind based on coordination with the property owner and the SHPO.

3.9 Parks and Recreation/Section 4 (f) and 6(f)

3.9.1 AFFECTED ENVIRONMENT

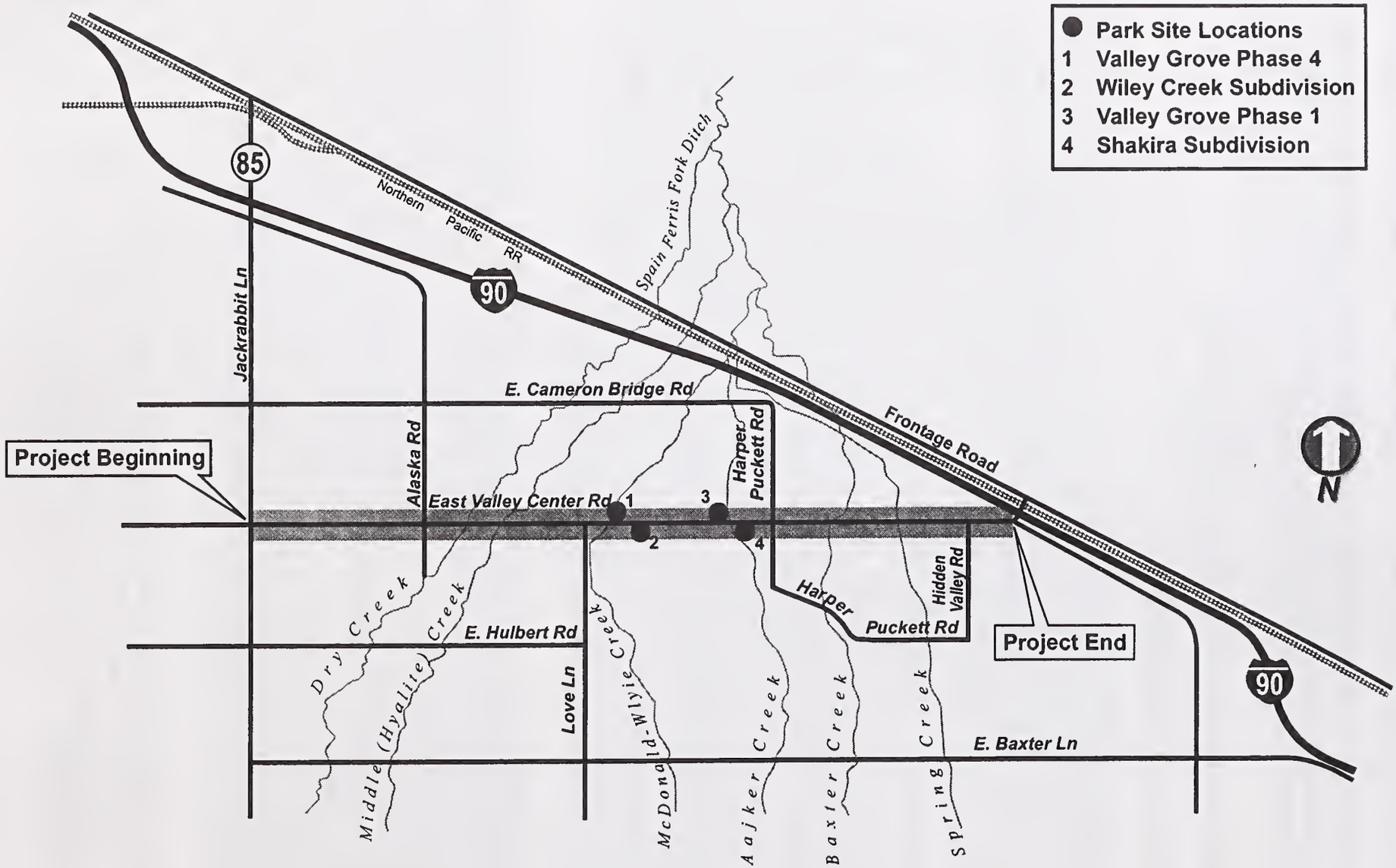
3.9.2 PARKS

Along the corridor there are four properties that are identified as "park" on the subdivision filings. The location of these four sites is shown in **Figure 3-8**. The descriptions of the sites are as follows, in order from west to east.

Valley Grove Phase 4. This site is located in the Valley Grove Subdivision phase 4 development and has been granted and donated to the County for public use. This site is on the north side of East Valley Center Road, and is northwest of the Wiley Creek subdivision. McDonald-Wylie Creek runs through this site which is comprised of four parcels. Based on a conversation with the developer, the parcels will remain in a natural state and serve as open space within the subdivision. The parcels will be turned over to the Homeowners Association and the HOA will be responsible for maintenance. The developer did not anticipate that the Association would do any formal development to the parcels. The parcels will not have any irrigation system to support landscaping. These parcels constitute a publicly controlled site set aside for public use. Based on coordination and comments from Gallatin County, this site is being evaluated under Section 4(f). Further discussion is contained in Chapter 4.0.

Wiley Creek Subdivision. The site at the Wiley Creek Subdivision consists of three adjacent parcels along the roadway. These parcels contain a landscaped berm with grass and trees which is watered with an irrigation system. The parcels have been granted and donated to Gallatin County for public use and through written agreement they are maintained by the Wiley Creek Homeowners Association. The berm serves primarily as a physical buffer between the homes and the roadway. Based on a conversation with a Homeowners Association Board member, the primary uses of the property include dog walking and winter sledding. The Association has discussed the possibility of adding a paved walking path to this landscaped area in the future, as none exists there now. The residents view this park as part of their overall neighborhood park system.

The currently dedicated right-of-way for the roadway at this location is 27.5 meters (90 feet). The current landscaping on the parcels abuts the edge of pavement of the existing roadway; therefore, a portion of the existing landscaping is within the dedicated roadway right-of-way.



Junction MT-85 - East

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Park Site.FH10 (7/2002)

Park Site Locations

Figure 3-8

This park is a publicly controlled land used for passive recreation. Based on coordination with the HOA and the County, it has been included in Section 4(f) evaluation. Further discussion of the potential impacts to this park is contained in Chapter 4.0 of this document.

Valley Grove Phase 1. Another parcel that has been granted and donated to the County for public use is located on the north side of East Valley Center Road and is bounded by Aajker Creek on the east and by Bison Trail Road on the west. This parcel contains a water-holding pond and water tank, as well as one small structure, and is fenced to control public access. Photos of this site are included as **Figure 3-9**. Although the site is labeled "park" on the subdivision plan for Valley Grove Phase 1, it is not currently used for recreational purposes and is not open to the public. Therefore it is not subject to Section 4(f) evaluation.

Shakira Subdivision. The fourth parcel on the corridor, that has been granted and donated to the County for public use, is located adjacent to the Shakira Subdivision, which is west of Harper Puckett Road and south of East Valley Center Road. The parcel is between the developed lots and Aajker Creek. This parcel is in a natural state and serves as open space adjacent to the development. The subdivision plan shows a 1.5-meter (5-foot) bike path; however, no specific trail has been developed. Each year a swath has been mowed through the grasses to serve as a pathway, but there are no plans to construct any permanent trail. Based on coordination and comments from Gallatin County, this parcel is being evaluated under Section 4(f). Further discussion is included in Chapter 4.0.

3.9.3 SECTION 6(f) PROPERTIES

The provisions of Section 6(f) of the Land and Water Conservation Fund Act 16 U.S.C. 460 (LWCF) apply to any FHWA-funded action when it affects publicly owned parks and recreation areas that were purchased and/or administered for recreational purposes under Section 6(f).

No section 6(f) properties have been identified that would be affected by any of the proposed alternatives. Based on coordination with Montana Fish, Wildlife and Parks, no sites have been identified in the project study area that were purchased with LWCF funds.

3.9.4 IMPACTS

No-Action Alternative. There would be no impacts to any parkland or lands purchased with LWCF funds as a result of the No-Action Alternative.

Preferred Alternative. The Preferred Alternative would have impacts to four sites that are adjacent to East Valley Center Road, and that have been granted and donated to the county for public use.

Photo 1
Looking north at site from East Valley Center Road

Photo 2
Looking east at site from Bison Trail

Valley Grove Phase 4. Based on preliminary design, 0.04 hectare (0.1 acre) of land at this site will need to be acquired for transportation right-of-way. The site contains four parcels and is 2.67 hectares (6.6 acres) in size. Typical cross section number 3 is proposed at this location, which includes a 2.8 meter (9 foot) shoulder along the north side and curb and gutter along the south side of the roadway.

Wylie Creek Subdivision. Based on the preliminary design, property number 1, at Wylie Creek subdivision, will have permanent impacts from the project. There will be acquisition of 0.14 hectare (0.35 acre) of the parcel. The total size of this parkland is 1.5 hectares (3.7 acres). Temporary construction impacts beyond the right-of-way may also occur. The typical cross section proposed at this location is cross section number 3 which has a curb and gutter treatment along the south side in order to reduce impacts to the parkland.

Valley Grove Phase 1. Based on preliminary design 0.08 hectare (0.2 acre) of this property will need to be acquired for transportation right-of-way. The total parcel is .47 hectare (1.16 acres). Temporary construction impacts beyond the right-of-way may also occur. Typical cross section number 1, which includes 2.8-meter (9-foot) shoulders on both sides of the roadway, is proposed at this location. During final design consideration will be given to reducing the need for right-of-way at this location.

Shakira Subdivision. Based on preliminary design, 0.01 hectare (0.02 acre) of land will be acquired for transportation right-of-way. Temporary construction impacts outside of the right-of-way may also occur. The total parcel is 0.84 hectare (2.09 acres). Typical cross section number 1 is proposed at this location, which includes 2.8-meter (9-foot) shoulders on both sides of the roadway. The pedestrian/bike path along the south side will provide improved access to this site.

3.9.5 MITIGATION

Acquisition of parkland will follow all applicable State and Federal guidelines. Impacts and mitigation for these parcels have been reviewed with Gallatin County. A letter of concurrence from Gallatin County is contained in Appendix A. At parcel No. 2-Valley Grove Phase 1, consideration will be given during final design to reducing the right-of-way requirement, if feasible. Parcels that are subject to Section 4(f) evaluation are discussed further in Chapter 4.0 of this document. Landscaping affected by temporary construction impacts will be replaced and restored. The planned pedestrian/bike path along the south side of the roadway, which will be graded, and where attached, will be paved, as a part of this project, would provide improved access to these sites.

3.10 Pedestrians and Bicyclists

3.10.1 AFFECTED ENVIRONMENT

According to the *Greater Bozeman Area Transportation Plan* (2001 Update), East Valley Center Road is listed as a principal arterial, and will retain that designation in the future. Currently there are no facilities for bicyclists or pedestrians. The roadway has no shoulders along the study corridor, so bicycle and pedestrian traffic must currently share the travel lane with automobiles.

"*Connecting Communities: Gallatin County Trails Report & Plan*," prepared for the Gallatin County Planning Board by the Trails Advisory Committee, locates areas for future bicycle paths and trails. The *Bozeman 2020 Plan* also locates future trail sites as determined by the Bozeman Recreation and Parks Advisory Board in conjunction with the Gallatin County Trails Committee.

The *Connecting Communities Draft Report* lists East Valley Center corridor as its second highest trail priority, after the Bozeman-Belgrade trail. The Bozeman-Belgrade Corridor trail would follow I-90 either on the north or south side, or along the I-90 frontage road. It would connect with the East Valley Center Corridor trail at the I-90 underpass. The East Valley Center corridor is being considered for designation as a boulevard trail, which is a 2.4- to 3-meter (8- to 10-foot) paved pathway parallel to a major roadway.

Two of the trails proposed in the *Bozeman 2020 Plan* would cross East Valley Center Road, in the eastern portion of the corridor. One would follow Baxter Creek, and the other is the Maynard-Boarder Trail, which would cross East Valley Center Road near Hidden Valley Road. The location of these future trails is only approximate at this time.

3.10.2 IMPACTS

No-Action Alternative. The No-Action Alternative does not impact any existing facilities or provide any new pedestrian/bike facilities.

Preferred Alternative. The Preferred Alternative has an option in the design for a 3-meter (10-foot) wide pedestrian/bike path along the south side of the project. This path would connect with the planned Baxter Creek trail and the Maynard Boarder trail. The pedestrian/bike path will be graded for the entire length of the project, and where attached to the roadway, will also be paved. Future paving of the separated path will be done by the County. The graded path will be useable and will improve safety and mobility for pedestrians and bicyclists along the corridor.

3.10.3 MITIGATION

No mitigation is required.

3.11 NOISE

3.11.1 AFFECTED ENVIRONMENT

The Federal Highway Administration (FHWA) has established national criteria by which to determine noise impact from traffic sources on certain land uses. These are described in **Table 3-5**.

Table 3-5
FHWA Noise Abatement Criteria (NAC)

Category	Leq(h)* dBA	Description of Activity Category
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance.
B	67 Exterior	Picnic areas, recreation areas, parks, residences, motels, schools, churches.
C	72 Exterior	Developed lands not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, schools, churches, libraries, hospitals, and auditoriums.

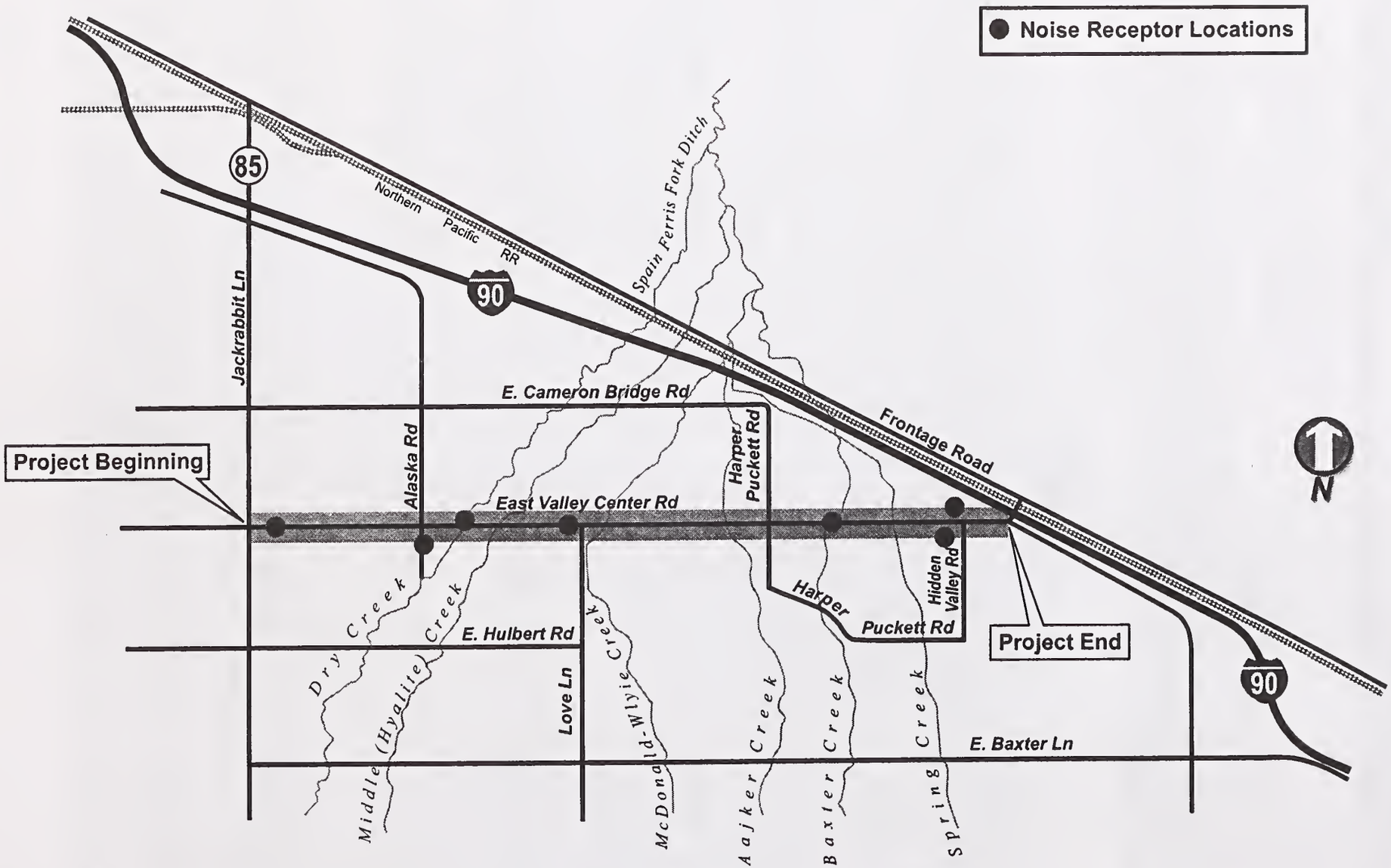
*Leq(h) describes the hourly value of Leq. Leq is the mean noise level during the peak traffic period.

The above criteria are typically applied to outdoor areas of use, which for residences is usually described as a first-floor outdoor patio/deck area. If a project would result in noise levels above these thresholds, noise mitigation would need to be considered as a part of the project.

In addition to the federal criteria described in **Table 3-5**, the Montana Department of Transportation (MDT) has established a 1.0 dBA approaching criteria, meaning noise impacts and abatement measures are considered if a project were to cause noise levels to approach the standard. For example, for residential area, noise impacts would be considered if the project development would result in a noise level of 66 dBA. In addition, a noise impact is considered to be substantial if the project would result in a noise increase of 13 dBA or greater over existing noise levels.

Land uses along the project corridor are residential and agricultural. Residential land uses are categorized by the Federal Highway Administration as Category B, which means that abatement should be considered if noise levels approach 67 dBA Leq.

Existing noise measurements were taken at seven locations along East Valley Center Road to represent the residential receptors within the project corridor. These locations are shown in **Figure 3-10**. These locations were identified as Category B land uses and represent the receptors that are generally the shortest distances from East Valley



Junction MT-85 - East

J:_Transportation\070789.300.1.0001\graphics\EA Graphics 8_2001\Noise.FH9 (2/2002)

Noise Monitoring Locations

Figure 3-10

Center Road. Field measurements at the seven residential locations were generally taken at the closest point of the residence or closest outdoor use areas to the roadway. Field results are shown in Error! Not a valid bookmark self-reference. (page 3-35).

Table 3-6
Existing Noise Levels

Site ID	Location	Monitored Noise Level (dBA)		Monitoring Site Distance from East Valley Center Road
		AM	PM	
1	4161 Valley Center Road	52.6	57.1	70 feet
2	4012 Valley Center Road	51.4	58.0	60 feet
3	2 Cloninger Lane	57.8	59.4	50 feet
4	1840 Valley Center Road	57.8	56.1	55 feet
5	1219 Valley Center Road	56.6	55.7	60 feet
6	Alaska S. Road/Valley Center Road	45.2	51.1	140 feet
7	77 Valley Center Road	47.4	52.4	95 feet

The existing noise levels at the residences are well below the FHWA Noise Abatement Criteria (NAC) of 67 dBA for Category B land uses.

3.11.2 IMPACTS

The criteria for determining noise impacts are:

- Comparison of predicted noise levels with FHWA Noise Abatement Criteria (NAC). Identify any predicted noise level which approaches the NAC. MDT has defined the term "approach" to mean 1 L_{eq} less than FHWA NAC.
- Determination of whether a substantial increase would occur from existing to predicted noise levels associated with the build year (2005) for the project. MDT has defined a substantial increase as one of 13 dBA L_{eq} or greater.

With both the No-Action Alternative and the Preferred Alternative, noise levels are projected to increase as a result of increase in traffic. However, this increase in traffic is projected to occur regardless of the improvements made. Modeling the projected future traffic for the design year 2025 increased the noise level at the seven receivers below the 13 dBA MDT has defined as a substantial increase. The noise levels at the modeled receivers will not approach or exceed the FHWA and MDT NAC standards of 67 dBA.

3.11.3 MITIGATION

No mitigation is required as design year (2025) noise levels do not exceed the FHWA NAC of 67 dBA or increase substantially (13 dBA) over existing.

3.12 Air Quality

3.12.1 AFFECTED ENVIRONMENT

The proposed action is in a carbon monoxide (CO) and particulate matter (PM_{10}) attainment area of Gallatin County and Montana for air quality under 40 CFR 81.327, as amended. As such it is not covered under the U.S. Environmental Protection Agency's Final Rule of November 24, 1993, on Air Quality Conformity. Therefore, the proposed action complies with Section 176(c) of the Clean Air Act as amended (42 U.S.C. 7521(a)).

3.12.2 IMPACTS

No-Action Alternative. The No-Action alternative will not have short-term air quality impacts. The increase in traffic volume will result in increased carbon monoxide emissions due to increased congestion.

Preferred Alternative. Short-term effects from construction operations would occur due to vehicle and equipment emissions and fugitive dust.

Long-term air quality impacts, with any of the proposed alternatives, including the No-Action, may include increases in emissions due to increases in traffic volumes. This may be offset with the Preferred Alternative because vehicle operation would be more efficient. The additional left-turn pockets at major intersections will reduce back-ups and related "idle" time for automobiles, thus reducing carbon monoxide emissions.

3.12.3 MITIGATION

Short-term impacts to air quality from construction activities will be mitigated as required by permit limitations and conditions covering operational requirements, emission limitations, and dust suppression measures. In addition, the *Standard Specifications for Road and Bridge Construction* (MDT, 1995) will be implemented as applicable. It presents guidelines for earthwork operations and other construction activities to help minimize effect on air quality.

3.13 Water Quality

3.13.1 AFFECTED ENVIRONMENT

The four Montana water basins (Upper Missouri, Lower Missouri, Yellowstone, and Columbia) are subdivided into 16 sub-major basins. These are further split into 99

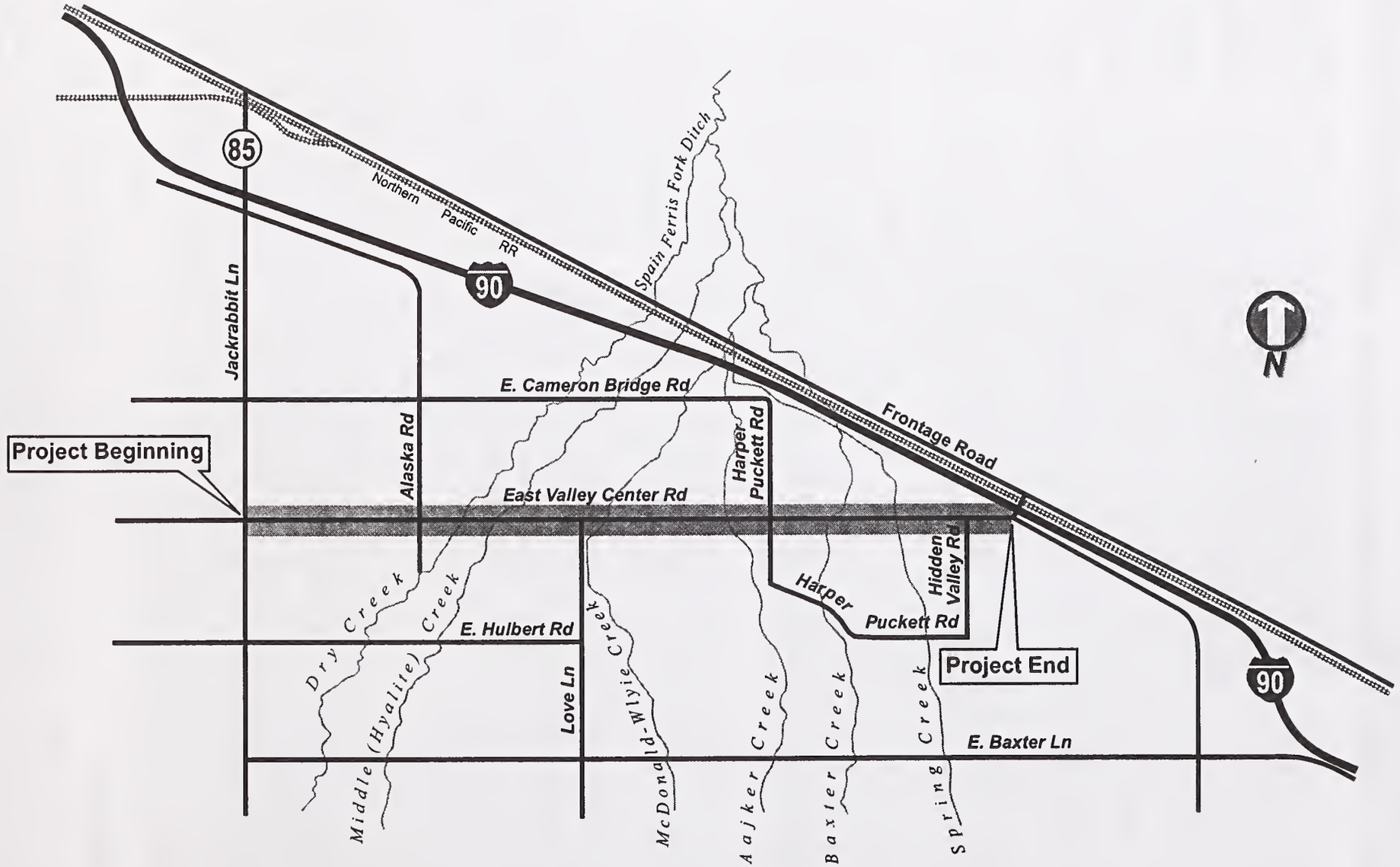
watersheds in the state. The study area falls within the Missouri River basin, the Upper Missouri River sub-major basin, and the Gallatin watershed. The Gallatin watershed is located to the east of the continental divide and north of Yellowstone National Park. The watershed covers approximately 4,662 square kilometers (1,800 square miles), the majority of which falls within Gallatin County. The EPA has classified this watershed as having "better water quality," meaning that designated uses are largely met and other indicators of watershed condition show few problems. The EPA has also classified the watershed as having a "lower vulnerability to stressors," meaning pollutants or other stressors are low and there is a lower potential for future decline in aquatic health.

The major drainage within the vicinity of the project is the Gallatin River. This river flows north as it passes approximately 3.2 kilometers (2 miles) west of the study area. The Gallatin River meets the headwaters of the Missouri River approximately 32 kilometers (20 miles) downstream from this point. There are numerous small water features that cross the project study area. The waters from these drainages all flow into the East Gallatin River which then flows into the Gallatin River. The creeks that pass through the study area are, from west to east, Dry Creek, Middle (Hyalite), McDonald-Wylie, Aajker, Baxter, and Spring as well as some minor tributaries of these creeks. These creeks which are not Wild and Scenic Rivers, can be seen in **Figure 3-11**.

The US EPA regulations require all states to prepare a 303(d) list every two years based on federal Clean Water Act requirements. The goal of compiling this list is to identify impaired and threatened lakes, rivers and streams throughout the state. An impaired waterbody is defined as "not fully supporting one or more beneficial uses." This list includes waterbodies that are impaired and are in need of Total Maximum Daily Load (TMDL) development. A TMDL is the total amount of a pollutant that a waterbody can assimilate and still meet water quality standards. Within the Gallatin watershed, the Montana Department of Environmental Quality (DEQ) Year 2000 Montana 303(d) List includes Middle Creek. Middle Creek is designated as a "low" priority on the 303(d) list. The probable causes of impairment are listed as "dewatering and flow alteration." The probable sources are listed as "agriculture, crop-related sources, and irrigated crop production." Other waterbodies listed as impaired within the Gallatin watershed are located outside of the project Study Area. Water from the waterbodies crossing through the project Study Area eventually flows into the Gallatin River via the East Gallatin River. The Gallatin River is listed on the 303(d) list as an impaired waterbody. The probable causes of impairment are listed as "dewatering, flow alteration, lead and metals." The probable sources are listed as "agriculture, crop-related sources, irrigated crop production, construction, highway/ road/bridge construction, resource extraction, abandoned mining, and natural sources".

3.13.2 IMPACTS

No-Action Alternative. The No-Action Alternative would have no short-term impact on existing water quality conditions and would result in less surface runoff since there is less paved surface area. Long-term impacts to water quality would occur with the No-


85
90
Northern Pacific RR
Spain Ferris Fork Ditch
Jackrabbit Ln
E. Cameron Bridge Rd
Frontage Road
Project Beginning
Alaska Rd
East Valley Center Rd
Harper Puckett Rd
Hidden Valley Rd
Harper Puckett Rd
Project End
E. Hulbert Rd
Dry Creek
Middle (Hyalite) Creek
Love Ln
McDonald-Wylie Creek
Aajker Creek
Baxter Creek
Spring Creek
E. Baxter Ln
N

Action as increases to traffic volumes would eventually result in increased runoff contaminants, when compared to existing conditions.

Preferred Alternative. Short-term impact to the water quality of streams and tributaries would result from the Preferred Alternative due to construction activities. Impacts related to construction include increased sedimentation during and after construction until bare surfaces are revegetated. These impacts are expected to be minimal due to the implementation of Best Management Practices (BMPs) which serve to prevent erosion, thereby restricting sediment from entering the surface water system.

Long-term impacts associated with the Preferred Alternative would include greater amounts of impervious (paved) roadway surface area that would increase the volume of storm runoff. Roadway water runoff is usually characterized by heavy metals, nutrients, sediments, oil, grease, deicing salts, and litter pollutants. These components are usually a product of petroleum combustion, pavement wear, and roadway maintenance activities. If not mitigated, these impacts to the water quality can affect the ecosystem of the stream in the study area and further downstream.

3.13.3 MITIGATION

All construction activities will comply with the Clean Water Act Section 404 permit conditions, as well as Section 401 water quality certification and Montana Stream protection Act (124) conditions and any additional state, federal or tribal water quality requirements/conditions.

The Preferred Alternative will require an erosion control plan. The plan will be submitted to the Montana Department of Environmental Quality's permitting and Compliance division in compliance with the Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314). Best Management Practices will be included in the design of this plan using guidelines as established in *MDT's Highway Construction Standard Erosion Control Workplan*. The objective is to minimize erosion of disturbed areas during and following construction. As part of the project, the disturbed areas will be re-established with a desirable vegetative community. Seeding requirements will be developed by MDT and must be followed by the construction contractor. Prompt revegetation of disturbed areas is a primary goal of the reseeding program.

All other needed water quality permits will be obtained and conditions of those permits will be met.

3.14 FLOODPLAINS

3.14.1 AFFECTED ENVIRONMENT

The creeks present in the study area include: Dry Creek, Middle (Hyalite) Creek, McDonald-Wylie Creek, Aajker Creek, Baxter Creek, and Spring Creek and tributaries

of these creeks. These creeks are all tributaries to the East Gallatin River that flows into the Gallatin River.

Based on a review of the National Flood Insurance Program (NFIP) maps, no Federal Emergency Management Agency (FEMA) delineated floodplains are present in the study area. A *Bridge Hydraulics Report* and a *Narrative Irrigation Report*, prepared specifically for the project, documents issues with the existing conditions of road crossings of creeks and ditches. The issues include ditch adequacy to carry existing irrigation flows and runoff water, undersized culverts which result in flood events overtopping the roadway or backing up water to flood adjacent property, and filling of channels and culverts with silt.

3.14.2 IMPACTS

No-Action Alternative. The No-Action Alternative would have no impacts to floodplains.

Preferred Alternative. The Preferred Alternative would have no encroachment onto or impacts to delineated floodplains.

3.14.3 MITIGATION

Designs and recommendations will be in compliance with 23 CFR 650A and Executive Order 11988. Permitting for Section 404 (Clean Water Act), regulated by the U.S. Army Corps of Engineers, will also be conducted.

The aim of the design for project bridges and culverts will be to accommodate passage of 25-year flows without overtopping the roadway.

3.15 WETLANDS

3.15.1 AFFECTED ENVIRONMENT

Wetlands are areas of transition between aquatic and terrestrial ecosystems and are characterized by a water supply sufficient to support vegetation adapted for growing in wet soils. Wetlands frequently support a wide variety of plant and wildlife species and provide streambank stabilization, water quality protection, and water storage.

A field survey and delineation of study area wetlands were conducted in August 2001 in accordance with the US Army Corps of Engineers (COE) *1987 Wetland Delineation Manual* and Executive Order 11990. Detailed information on the wetlands is presented in Appendix B, Field Narratives; and Appendix C, Corps of Engineers Data Forms.

The MDT Function/Value Assessment and hydrogeomorphic classification were also conducted using the *1996 MDT Montana Wetland Assessment Method*, which rates the

functions and values of wetlands from Category I (highest) through Category IV (lowest) (see **Table 3-7**). This survey included an area 15 meters (50 feet) out from the edge of public right-of-way on either side of the roadway.

Table 3-7
Wetland Summary

Wetland Site	Hydrogeo-morphic Class	MDT Function/Value Assessment Category	Area within approximately 15 meters (50 feet) from edge of ROW	Jurisdictional Status
1. Baxter Creek	Riverine	III	0.010 hectare (0.025 acre)	Jurisdictional
2. McDonald-Wylie Creek	Riverine	III	0.023 hectare (0.057 acre)	Jurisdictional
3. Excavated area	Depressional	IV	0.923 hectare (0.228 acre)	Non-jurisdictional
4. Tributary to Dry Creek	Riverine	III	0.022 hectare (0.055 acre)	Jurisdictional
5. Possible natural creek	Riverine	III	0.105 hectare (0.260 acre)	Jurisdictional
6. Roadside ditch	Depressional	IV	0.005 hectare (0.012 acre)	Non-jurisdictional
7. Roadside ditch	Depressional	IV	0.006 hectare (0.014 acre)	Non-jurisdictional
8. Roadside ditch	Depressional	IV	0.027 hectare (0.066 acre)	Non-jurisdictional
9. Roadside ditch	Depressional	IV	0.024 hectare (0.059 acre)	Non-jurisdictional
10. Middle Creek	Riverine	II	0.034 hectare (0.095 acre)	Jurisdictional
		Total	**0.353 hectare (0.871 acre)**	

3.15.2 WETLAND DESCRIPTIONS

Ten wetlands were present within the project corridor, and total wetland area is 0.353 hectare (0.871 acre) or less than one acre (see **Table 3-7**). Jurisdictional wetlands are those regulated by the US Army Corps of Engineers under Section 404 of the Clean Water Act. Wetlands 1, 2, 4, 5, and 10 are jurisdictional, and their combined area is approximately 0.020 hectare (0.492 acre) or less than one-half acre. Non-jurisdiction wetlands are not regulated by the COE, but may be protected by other federal, state, or local regulations. Wetlands 3, 6, 7, 8, and 9 are non-jurisdictional.

The ten wetland sites are riverine or depressional hydrogeomorphic types and were of MDT Function/Value Assessment Categories II (very high quality), III (moderate quality), or IV (low quality). No Category I wetlands are in the study area.

Wetland locations are shown in **Figure 3-12**. Photos of roadside wetlands are shown in **Figure 3-13**. Wetland impacts are shown in **Figure 3-14** through **Figure 3-17.**

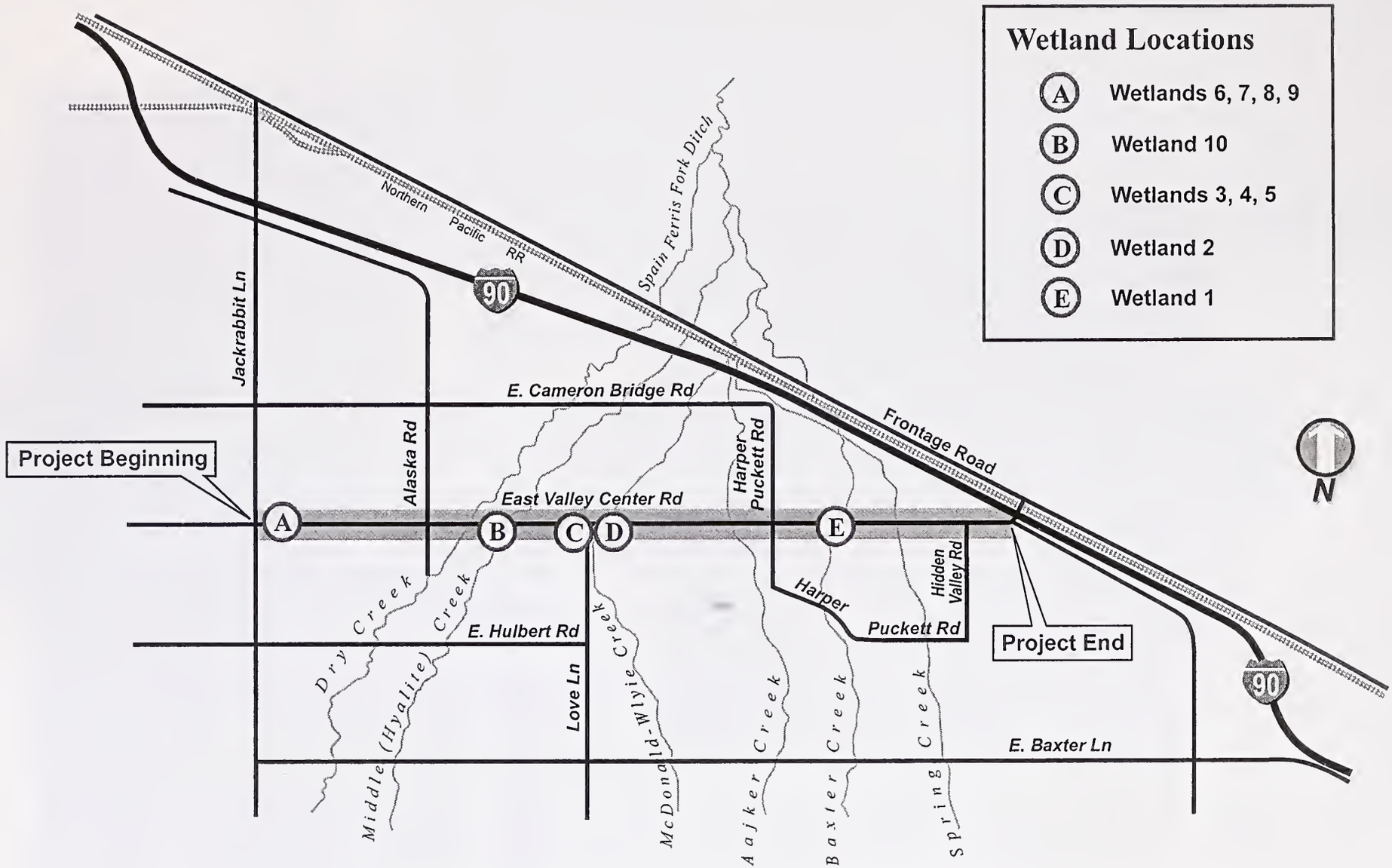
Wetland 1 is a jurisdictional emergent wetland associated with Baxter Creek on the south side of the roadway. Dominant vegetation is cattail and American speedwell with lady's thumb, common monkey-flower, small-fruited bulrush, Bebb), and spurless touch-me-not. Hydrology is provided by creek flows and pooling upstream of the culvert. Wetland 1 is a Riverine Category III wetland rated high for water storage, sediment/shoreline stabilization, and production export/food chain support. During a follow-up site visit in December 2001 it was noted that the western edge had been filled as during culvert reconstruction performed by Gallatin County.

Wetland 2 is a jurisdictional emergent wetland associated with McDonald-Wylie Creek. Dominant vegetation is cattail and beaked sedge with stick-tight, reed canary grass, mannagrass, Bebb willow, and white-water buttercup. Hydrology is provided by creek flows and pooling upstream of the culvert. Recent changes to the upper banks are associated with a subdivision on the east side of Wetland 2, but probably have not had a significant influence on the wetland. Wetland 2 is a riverine Category III wetland rated high for water storage, sediment/nutrient/toxicant removal, sediment/ shoreline stabilization, production export/food chain support, and groundwater discharge/recharge.

Wetland 3 is a non-jurisdictional emergent wetland in a borrow pit or otherwise excavated area in the southwest quadrant of Love Lane. Dominant vegetation is duckweed, waterweed, and white-water buttercup in the open water area and by stick-tight, reed canary grass, and small-fruited bulrush on the banks. Mature cottonwoods are present adjacent to the west side of the wetland. The hydrology appears to be supplied either by groundwater or by surface runoff from irrigation. No outlet culvert was present. Wetland 3 is a depressional Category IV wetland with low ratings in many categories.

Wetland 4 is a jurisdictional emergent wetland associated with an unnamed tributary of Dry Creek. Dominant vegetation is cattail and reed canary grass; Bebb willow dominates the area south of the ROW. Hydrology is provided by creek flows and pooling upstream of the culvert. Wetland 4 is a riverine Category III wetland rated high for water storage, sediment/ nutrient/toxicant removal, sediment/ shoreline stabilization, production export/food chain support, and groundwater discharge/recharge.

Wetland 5 is a jurisdictional emergent wetland associated with Dry Creek. Dominant vegetation is cattail and small-fruited bulrush with sandbar willow along the southern road edge. Duckweed was present in pooled water. Hydrology is provided by creek flows and pooling upstream of the culvert. Wetland 5 is a riverine Category III wetland rated high for water storage, sediment/nutrient/toxicant removal, sediment/shoreline


Wetland Locations
A Wetlands 6, 7, 8, 9
B Wetland 10
C Wetlands 3, 4, 5
D Wetland 2
E Wetland 1
Northern Pacific RR
Spain Ferris Fork Ditch
Jackrabbit Ln
E. Cameron Bridge Rd
Frontage Road
Project Beginning
Alaska Rd
East Valley Center Rd
Harper Puckett Rd
Hidden Valley Rd
Harper Puckett Rd
Project End
E. Hulbert Rd
Dry Creek
Middle (Hyalite) Creek
Love Ln
McDonald-Wylie Creek
Aajker Creek
Baxler Creek
Spring Creek
E. Baxter Ln
90
N

Roadside Ditch
Location C

Baxter Creek Wetland
Location E

Legend:

Wetland (ID #)

Potentially Impacted Wetland

100 0 100 200 Feet

50 0 50 Meters

N

Wetland Resources (Location A)

Junction MT85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\wetalnds.epr

Figure 3-14

Legend:

Wetland (ID #)

Potentially Impacted Wetland

100 0 100 200 Feet

50 0 50 Meters

N

Wetland Resources (Location B)

Junction MT85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\wetalnds.apr

Figure 3-15

Legend:

Wetland (ID #)

Potentially Impacted Wetland

100 0 100 200 Feet

50 0 50 Meters

N

Junction MT85 - East

Wetland Resources (Locations C, D)

q:\jobs\bozeman_jct85\apr\stateplane83\wetalnds.apr

Figure 3-16

Legend:

Wetland (ID #)

Potentially Impacted Wetland

100 0 100 200 Feet

50 0 50 Meters

N

Wetland Resources (Location E)

Junction MT85 - East

q:\jobs\bozeman_jct85\apr\stateplane83\wetalnds.apr

Figure 3-17

stabilization, production export/food chain support, and groundwater discharge/recharge.

Wetlands 6, 7, 8, and 9 are non-jurisdictional emergent ditch wetlands adjacent to the roadway at the west end of the project. Vegetation of Wetland 6 is a cattail monoculture and was associated with a small drainage ditch, apparently a spur of the Mammoth Fork Ditch system. Wetlands 7, 8, and 9 were dominated by cattails. Additional species at Wetland 7 were small-fruited bulrush, fringed loosestrife, and starry false Solomon's seal. Additional species at Wetland 8 were small-fruited bulrush, lady's thumb, field mint, stinging nettle, and red-osier dogwood. Wetlands 7, 8, and 9 were not associated with any irrigation ditches; hydrology appears to be dependent on surface runoff, and may be augmented by seasonal irrigation of the adjoining fields. Wetlands 6, 7, 8, and 9 are depressional Category IV wetlands rated low in many categories.

Wetland 10 is a jurisdictional emergent and scrub-shrub wetland associated with Middle Creek, also known as Hyalite Creek. The streambank vegetation was dominated by reed canary grass and small-fruited bulrush. The scrub-shrub vegetation was dominated by sandbar willow with balsam polar on the upper edges. Hydrology is provided by creek flows and pooling upstream of the culvert. Wetland 10 is a riverine Category II wetland rated high for wildlife and fish habitat, water storage, sediment/ nutrient/toxicant removal, sediment/shoreline stabilization, production export/food chain support, and groundwater discharge/recharge.

3.15.3 IMPACTS

No-Action Alternative. Under the No-Action Alternative, no direct wetland impacts are anticipated. Accidents and related potential for spills of fuel and other contaminants into area waters may increase in proportion to projected increasing traffic volumes. Impacts associated with road maintenance, such as herbicide use, would continue.

Preferred Alternative. Based on preliminary plans, the Preferred Alternative is estimated to permanently impact a total of 0.170 hectare (0.421 acre) of jurisdictional wetlands and a total of 0.269 hectare (0.663 acre) of both jurisdictional and non-jurisdictional wetlands (see **Table 3-8**). The proposed widening of the roadway will impact all ten wetlands. Under the Preferred Alternative, wetland impacts, both in terms of actual loss and decreases in functional capacity, would result primarily from vegetation clearing and grubbing and from fill placement. Temporary impacts may result from movement of equipment outside of construction impact limits; however, these potential impacts would be minimized by prohibiting vegetation clearing or grubbing beyond the construction limits. Wetland impacts resulting from fill placement are discussed below. Potential for accidents and related spills of fuel and other contaminants into area waters would be reduced through addition of highway shoulders.

Table 3-8
Wetland Impacts

Wetland Number	Jurisdictional Impacted Area	Non-Jurisdictional Impacted Area
1	0.010 hectare (0.025 acre)	0
2	0.023 hectare (0.057 acre)	0
3	0	0.037 hectare (0.091 acre)
4	0.020 hectare (0.051 acre)	0
5	0.081 hectare (0.199 acre)	0
6	0	0.005 hectare (0.012 acre)
7	0	0.006 hectare (0.014 acre)
8	0	0.027 hectare (0.066 acre)
9	0	0.024 hectare (0.059 acre)
10	0.036 hectare (0.089 acre)	0
Total	**0.170 hectare (0.421 acre)**	**0.099 hectare (0.242 acre)**
Total area of impacted wetlands = 0.269 hectare (0.663 acre)		

Additionally, temporary and indirect wetland impacts could also result from the project. Construction work areas may result in temporary impacts to jurisdictional wetlands. These impacts will be avoided or minimized based upon use of MDT's Best Management Practices. Indirect wetland impacts may result from the recommended increased size of culverts and bridges. By facilitating water flow, larger culverts and bridges may cause the wetlands to drain more efficiently, move sediments out of existing channels, and increase flow velocities. Together these effects may reduce overall wetland areas by creating drier soil conditions which would restrict the extent of the hydrophytic vegetation.

3.15.4 MITIGATION

Due to the location of wetlands, it is not possible to entirely avoid wetland impacts. The design of the Preferred Alternative will, however, consider all feasible measures to minimize wetland impacts. Refinement of the design plans to avoid and minimize impacts to wetlands will occur throughout the final design process.

The 1990 Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines requires that wetland mitigation be addressed in the following sequence:

1. Avoid potential impacts to the maximum extent practicable.
2. Minimize unavoidable impacts to the extent appropriate and practicable.
3. Compensate for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required.

Avoidance and Minimization
Design consideration will be given to avoidance or minimization of wetland impacts. Bridges and culverts will be designed to protect channel width and prevent creek bank scour and downcutting.

Compensation
Compensatory mitigation for jurisdictional wetland loss is being developed in compliance with COE permit requirements. MDT will pursue mitigation sites within the study area. The conceptual design for the mitigation site will provide for restoration and enhancement of emergent and scrub-shrub wetlands within local creek floodplains in an amount to be determined by the Corps of Engineers through the 404 permit process.

The most significant wetland functions likely to be impacted by the Preferred Alternative include fish and wildlife habitat, water storage, sediment/nutrient/toxicant removal, sediment/shoreline stabilization, production export/food chain support, and groundwater recharge/discharge.

The following additional general measures will be implemented to avoid, minimize, and compensate for disturbance of wetlands during construction of the Preferred Alternative:

- Clearing and grubbing for construction will not be allowed outside of construction limits in areas where wetlands are present.
- Temporary impacts to wetlands within the ROW and construction easement areas will be mitigated by restoring wetlands to original contours and revegetating immediately following construction. Temporarily disturbed wetland and streamside areas will be revegetated with native material.
- The design process will incorporate appropriate measures to preserve wetlands and other waters of the United States, while providing a highway that meets MDT's geometric design standards. Consideration will be given to increasing embankment slopes in the vicinity of wetlands on a case-by-case basis.
- All Clean Water Act Section 404 permit conditions, as well as Section 401 water quality certification, Montana Stream Protection Act (124) conditions, and any additional state or federal water quality requirements/conditions, will be implemented.
- Removed culverts, and other construction materials will not be stockpiled in or adjacent to wetland or stream areas.
- Construction equipment operating in wetlands will be limited to what is needed to perform the necessary work.
- Measures specified in Section 3.17.2 under Noxious Weeds will be taken to prevent the introduction/spread of noxious weeds.

- Wide-track or balloon-tire construction equipment will be used in saturated/inundated areas. Timber pads, prefabricated equipment pads or geotextile fabric overlain with gravel fill will be used with normal equipment in such areas. All such material will be removed following construction.
- Hazardous materials, including fuels and lubricating oils, will not be stored and construction equipment will not be refueled within 30 meters (100 feet) of wetlands or streams.

Permits for placing fill in wetlands will be obtained from the U.S. Army Corps of Engineers under Section 404 of the Federal Clean Water Act, as amended. The COE will be consulted to determine the exact replacement ratio and appropriateness of potential mitigation sites.

Wetlands as well as their associated functions permanently impacted by the Preferred Alternative will be mitigated by wetland creation, restoration, and/or enhancement. Wetland areas temporarily impacted by construction activities will be restored and replanted as necessary.

3.15.5 NO PRACTICABLE ALTERNATIVE FINDING

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which would result from such use.

3.16 TERRESTRIAL BIOLOGICAL RESOURCES

3.16.1 AFFECTED ENVIRONMENT

Vegetation
The study area is located in the Gallatin Valley and vegetation communities are associated with relatively flat, irrigated farmland, recently developed farmland, landscaped residential areas, or wetland and riparian bands adjacent to streams and ditches. Native plant communities are present primarily within the wetland and riparian bands and are discussed in Section 3.16.

Sensitive Plants
No Montana Natural Heritage Program (MTNHP) plant species of special concern were observed during the August 2001 field survey, a time when the plant species of special concern with a high probability of occurring in the study area would be expected to be flowering or fruiting.

Noxious Weeds/Invasive Species
As a federally funded action, the project is subject to the provisions of Executive Order 13112, signed on February 3, 1999. EO 13112 addresses federal agency responsibilities with respect to invasive species (noxious weeds).

State-listed noxious weeds of the study area were: Canada thistle near or adjacent to all study area streams and ditches, common tansy near or adjacent to streams and ditches on the east side of the study area, whitetop common in roadside gravels, and spotted knapweed scattered adjacent to the road.

Wildlife
Varied wildlife species inhabit the general study area, particularly along creek corridors. No rare or sensitive species were observed during the site visits. Montana Department of Fish, Wildlife and Parks (FWP) is more concerned about habitat in the study area than individual species.

Mammals
Species likely to be present in the study area include white-tailed deer, mule deer, coyote, and snowshoe hare. Elk, moose, and black bear are likely to be transient species. White-tailed deer were observed during project surveys.

Birds
Species likely to be present in the study area include ferruginous hawk, Swainson's hawk, golden eagle, prairie falcon, horned lark, eastern screech-owl, western screech-owl, and mountain chickadee. The Migratory Bird Treaty Act (MBTA) states that taking, killing or possessing migratory birds is unlawful, and the project effects were analyzed relative to this act. Loss of roadside vegetation during and directly following construction could have an indirect impact on avian species that rely on the areas for food, cover, or nesting habitat.

3.16.2 IMPACTS

No-Action Alternative. Under the No-Action Alternative, disturbances to terrestrial resources associated with the use and maintenance of the existing highway would continue in conjunction with expected traffic volume increases. No vegetation or habitat loss would occur, although an increase in noxious weed infestations is possible. Wildlife would continue to move across the highway and mortality levels would increase incrementally in response to increasing traffic. Periodic accidents and potential for spills of fuel and other contaminants into area waters and upland habitats would continue and may also increase in conjunction with increases in traffic volume.

Preferred Alternative. The construction and use of the Preferred Alternative will result in impacts as described below.

Vegetation
The riparian vegetation within the construction limits would be disturbed and/or removed by the project. A portion of this area would be permanently impacted by the addition of paved shoulders and a paved pedestrian/bike path. Slopes would be revegetated following construction.

Sensitive Plants
No Montana Natural Heritage Program sensitive plants were observed within the project and no impacts to such species are anticipated.

Noxious Weeds
Construction of the Preferred Alternative would disturb existing noxious weed communities and would create additional habitat suitable for noxious weed establishment within newly disturbed areas. Exposed soils, particularly adjacent to highways, are extremely vulnerable to weed establishment. Weed spread from highway corridors onto adjacent land can result in reduced land values and productivity as well as the potential for environmental degradation through improper herbicide use.

State-listed noxious weeds of the study area (Canada thistle, common tansy, whitetop, and spotted knapweed) all have the potential to rapidly spread into areas disturbed by road construction as well as adjacent undisturbed areas.

Wildlife and Sensitive Wildlife Species
Construction would occur in areas immediately adjacent to the existing road. Except for riparian areas, these sites are currently subjected to other sources of human disturbance including agricultural and residential activities and are of low to moderate overall habitat quality. Due to greater plant diversity and proximity to water, wildlife diversity is likely greater in the riparian and wetland areas. Many species use these areas as movement corridors. Using the *MDT Wetland Assessment Method*, the Middle (Hyalite) Creek riparian area is rated high for both wildlife habitat and fish/aquatic habitat. Other creek areas are generally rated moderate for these habitats.

Construction of the Preferred Alternative would result in direct wildlife mortality primarily to species with limited mobility and/or species occupying burrows or nests at the time of construction. More mobile species, such as adult deer, coyotes, and most adult birds, would be able to avoid direct mortality by moving into adjacent habitat. Loss of roadside vegetation during construction could have an indirect impact on avian species that rely on the areas for food, cover, or nesting habitat. If clearing occurs in the spring, nesting animals and their young may be affected through loss of suitable habitat for these activities. These effects will lessen over time as the disturbed area recovers, and while they may cause losses of individuals, they will not affect wildlife populations.

Wildlife species not classified as threatened or endangered could be affected by the project. The improved road surface and increased design speed limit will enable vehicles to travel at a higher rate of speed. Any species that occur or pass through the area could suffer higher mortality rates. Higher mortality rates for these species would constitute an indirect impact of the project.

Generally, indirect disturbance from road construction activities to wildlife communities in the study area is considered minor, as the disturbance would be temporary and alternative similar habitat is available. The survival of displaced species which resided

exclusively within the construction area would, however, depend on the carrying capacity of adjacent undeveloped habitat.

Habitat Fragmentation
Habitat fragmentation is the separation of previously contiguous blocks of habitat into disconnected pieces. Habitat fragmentation can result in impediments to wildlife movement and corresponding genetic exchange among populations. This existing highway, in association with the agricultural and residential development, is a contributor to habitat fragmentation in the study area.

The Preferred Alternative would add to habitat fragmentation in the study area by further reducing the amount of vegetation cover adjacent to the highway, incrementally increasing separation between cross-highway habitats; and accommodating increased traffic speeds which are likely to result in increased wildlife/vehicle collisions.

3.16.3 MITIGATION

Vegetation
With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be prohibited. No forested or shrub vegetation will be cleared for placement of temporary facilities. Any temporary clearing necessary for culvert placement outside the construction limits will be kept to the smallest area possible and reclaimed with similar native vegetation immediately following construction.

Following construction, disturbed areas will be seeded as soon as possible with native species.

Sensitive Plants
No sensitive plants were identified during the August 2001 rare plant survey. No mitigation is proposed.

Noxious Weeds
Noxious weeds in the highway ROW will be controlled subject to MDT and Gallatin County standards.

All areas disturbed by construction will be reseeded with desirable groundcover to inhibit invasion of noxious weeds and for aesthetic purposes.

Wildlife and Sensitive Wildlife Species
In addition to the provisions discussed above under Vegetation, the following measures will be followed:

- To the extent possible, the contractor will lay back (and seed) slopes. Cut edges will be graduated in to low areas to maximize wildlife permeability.
- MDT will continue to participate in ongoing regional interagency planning efforts relative to wildlife habitat linkage areas.
- Prior to construction, MDT will perform a survey of raptor nests. Where appropriate and feasible, construction activity timing restrictions will be required.
- Where power lines are modified or reconstructed, they will be raptor-proofed to avoid electrocution hazards.

3.17 Aquatic Resources

3.17.1 AFFECTED ENVIRONMENT

From west to east, the creeks within the study area are: Dry Creek, Middle (Hyalite), McDonald-Wylie, Aajker, Baxter, and Spring and some unnamed tributaries to these creeks. There are also irrigation ditches within the study area. Some creeks have been converted for irrigation, and some ditches have developed riparian bands of willow and cottonwood.

The ditches in the study area include: Spain-Ferris, Spain-Ferris Fork, Mammoth Fork, Beck-Border, and Farmer's Canal. Since the majority of ditches connect with the East Gallatin or Gallatin Rivers, they can provide fish habitat, especially during lower flow periods when ditches may be carrying more water than the creeks.

The fish species likely to be present in these creeks and ditches include three non-native game fish: brown trout, rainbow trout, and brook trout. Non-game species include longnose dace, longnose sucker, white sucker, mottled sculpin, and mountain whitefish.

According to the Montana Rivers Information System, Middle Creek is listed as a trout stream with the lower section rated as "moderate" value. Baxter Creek, where there has been a significant decrease in angling use over the past decade, was recently downgraded from a trout stream to a "limited" value stream. There were no data available for McDonald-Wylie Creek on the MRIS website at the time of this report.

Rare and Sensitive Fish Species
US Fish and Wildlife Service, FWP, and MTNHP consultations identified no rare or sensitive aquatic species occurrences in the study area. Therefore, no further species-specific consultation or mitigation will be required.

3.17.2 IMPACTS

No-Action Alternative. The No-Action Alternative will not cause impacts to aquatic resources.

Preferred Alternative. Direct impacts from the project will include the potential for increased sediment loads due to earth-moving activities and channel disruption from culvert replacement and bridge work. Incidental fish mortality could also occur, particularly if the construction activities overlap with either spawning or fry (young fish) outmigration seasons. Other direct impacts could potentially occur from construction related fuel spills or other introduction of contaminants into the creeks or ditches.

Indirect impacts may include changes in channel structure due to the new culverts and bridges. Overtime traffic is expected to increase in the study area and may result in increased petroleum products washing off the road and into the creeks.

Impacts would result from the above channel changes. Clearing out of sediment and increasing stream velocities slightly is not anticipated to have a negative effect on the fishery. Other effects may include a slight decrease in overall water quality due to increased road wastes from runoff.

3.17.3 MITIGATION

To allow fish passage and to alleviate creek sedimentation, larger culverts will be installed where appropriate. A bridge will be provided over Middle (Hyalite) Creek. However, this facilitation of flow may result in reduced hydrology for creek bank wetlands, may increase the overall creek velocities in the area of road crossings and may decrease sediment deposits.

3.18 THREATENED OR ENDANGERED SPECIES

3.18.1 AFFECTED ENVIRONMENT

Threatened or endangered species include those species listed or proposed for listing by USFWS as threatened or endangered. Under Section 7 of the Endangered Species Act, as amended, activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects on species federally listed or proposed for listing as threatened or endangered.

The following proposed or listed species were considered for occurrence in the study area:

- Bald eagle (*Haliaeetus leucocephalus*), Threatened
- Ute ladies' tresses orchid (*Spiranthes diluvialis*), Threatened
- Water howellia (*Howellia aquatilis*), Threatened
- Spalding's catchfly (*Silene spaldingii*), Proposed Threatened

Field surveys for the federally threatened species were conducted in August and December 2001. No threatened, endangered, or proposed for listing species were observed during the site visits.

Bald Eagle. Migrating bald eagles frequent the study area in November and March, with highest incidence of passage occurring between February 15 and April 15. Bald eagle numbers are increasing overall, and higher numbers of non-breeding subadults have been documented in the Gallatin valley.

Ute Ladies' Tresses Orchid. Ute ladies' tresses orchid is known from wet meadows near Three Forks, Whitehall, and Townsend, Montana. Although potential habitat is present in the study area, this species was not observed during surveys conducted during the August blooming period.

Water Howellia. Water howellia occurs in vernal ponds and oxbow sloughs and is known from pothole ponds in the Swan Valley. Potential habitat is not present in the study area.

Spalding's Catchfly. Spalding's catchfly occurs at elevations of 820 to 1,060 meters (2,700 to 3,500 feet) in open grasslands or with scattered conifers and is known from Palouse prairie grasslands of northwest Montana. Potential habitat is not present in the study area.

3.18.2 IMPACTS

No-Action Alternative. Under the No-Action Alternative, disturbances to terrestrial and aquatic resources associated with the use and maintenance of the existing highway would continue.

Preferred Alternative.
Bald Eagle. There is no suitable nesting or foraging habitat in the study area, therefore there will be no direct impacts on bald eagles. However, indirect impacts are possible. As regional bald eagle populations increase, marginal habitat will be increasingly utilized. The improved road surface and increased design speed, in conjunction with a future increase in traffic volume, may lead to higher numbers of road killed wildlife. The carcasses would provide carrion for bald eagles, thus increasing the likelihood of eagles being hit by vehicles.

Ute Ladies' Tresses Orchid, Water Howellia, and Spalding's Catchfly. Based on the known habitats of these species and results of the rare plant survey conducted in the study area, project implementation is not expected to jeopardize the continued existence of these species.

3.18.3 MITIGATION AND COORDINATION

MDT does not have any specific concerns for threatened or endangered species in the study area. The two species of interest on this project are the bald eagle (threatened) and the Water howellia (threatened). The study area does not contain any suitable habitat for either species, and therefore no Biological Assessment is required. The Montana Natural Heritage Program (MNHP) did not identify any threatened or endangered species in the study area.

Informal consultation with the US Fish and Wildlife Service (USFWS) determined there are no threatened or endangered plant or animal species with potential to be affected by this project. Therefore, the project will not create any direct, indirect, or cumulative impacts on these species and a Biological Assessment is not required.

Mitigation for bald eagle and other wildlife in the study area consists of raptor-proofing all power poles that are to be relocated along the ROW, as stated in the August 3, 2001, letter from USFWS. MDT should follow the "Suggested Practices for Raptor Protection of Power Lines", Edison Electric Institute, Washington DC, Pub. #41-40-00-04-371" recommendations for proper techniques.

There are no threatened or endangered plant species with potential to be affected by the project. Therefore, no mitigation for threatened or endangered plant species is required.

3.19 HAZARDOUS WASTE

3.19.1 AFFECTED ENVIRONMENT

Carter & Burgess, Inc. performed a Phase I Environmental Site Assessment (ESA) of the study corridor, in conformance with the scope and limitations of ASTM Standard Practice E 1527-97. According to the ESA, there is only one registered underground storage tank (UST) site within a 0.4-kilometer (0.25-mile) radius of the study corridor, and one leaking UST site located within 0.8-kilometer (0.50-mile) radius of the study corridor. These sites are located at 5651 Love Lane, south of East Valley Center Road.

Based on the ESA research, an on-site inspection of the corridor in August 2001, and a review of historical aerial photos, the ESA concluded that the corridor is a low environmental risk. A low risk rating means that there are no suspected or known environmental concerns that would warrant further investigation.

3.19.2 IMPACTS

No-Action Alternative. There would be no impacts to hazardous materials sites with the No-Action Alternative.

Preferred Alternative. The Preferred Alternative is not expected to encounter hazardous waste or materials during project construction. The UST site located at 5651 Love Lane is not expected to be disturbed by the project.

3.19.3 MITIGATION

In the event that contaminated soils or materials are encountered during construction, Article 107.24, "Discovery of Underground Storage Tanks", in MDT's *Standard Specifications for Road and Bridge Construction*, would be implemented.

3.20 CONSTRUCTION

3.20.1 IMPACTS

No-Action Alternative: The No-Action Alternative would have no construction-related effects in the study area.

Preferred Alternative: There are several impacts associated with the construction of the preferred alternative. Construction impacts are expected to be temporary and short term and may include:

- *Noise and Vibration*. The operation of various types of machinery, such as heavy earth moving equipment, paving equipment, power tools, pile drivers, and trucks, in close proximity to residences would create an undesirable noise condition. Impacts from vibration are also likely during the construction period.
- *Air Quality*. A temporary increase in air pollution due to dust and fumes is expected as a result of construction operations.
- *Traffic*. Traffic patterns will be disrupted for travelers who utilize East Valley Center Road. Construction detours will be required for some periods of time during construction. Traffic will be reduced to one lane periodically during construction, which will result in wait times of up to 15 minutes for alternating directional flow. The roadway may be closed to through traffic from MT 85 to Love Lane for a period of time during construction, but local access in this area will be maintained. Temporary detours will be required.
- *Waste Disposal*. Waste generated during construction will include waste rock and soil; asphalt pavement, concrete, and structural material from culverts from the removal of the old roadway surface and structures. In addition, waste associated with contractor equipment such as fluids from vehicles will be generated.
- *Visual*. Stockpiles of earth materials, stacks of construction materials, and parked equipment and vehicles would cause a temporary visual impact to the residents near the locations of construction activities.

- *Erosion and Sedimentation*. Runoff from areas of exposed or disturbed soils may affect water quality of nearby surface waterways. Sedimentation may occur when eroded soils collect in areas below the construction site.
- *Aggregate Source*. A specific aggregate source has not been identified; however, there are several existing commercial sources within a reasonable distance from the project. No new source would need to be developed for this project.

3.20.2 MITIGATION

Construction impacts will be minimized through the implementation of control measures during construction. These measures will include:

- Limit noise generating construction activities to occur between the hours of 7:00 AM and 9:00 PM near residential areas to minimize noise impacts.
- The use of appropriate dust suppression measures to minimize dust impacts associated with the construction activities. The contractor will obtain air quality permits from the Montana Department of Environmental Quality.
- Erosion control methods will be utilized including temporary and permanent seeding and mulching on disturbed slopes. Sediment control measures will be utilized, such as check dams, silt fences, and sedimentation basins along drainage routes and adjacent to sensitive areas.
- The contractor will implement an approved water quality control plan, so that appropriate measures are in place, including Best Management Practices, in case of an accidental spill.
- A suitable construction staging area will be established and the contractor will store materials and equipment in such a manner as to reduce visual impacts from nearby residences.
- Maintain traffic control throughout the construction process in order to maximize safety and minimize inconvenience to local road traffic. Delays will be scheduled, as much as possible, to avoid high peak traffic periods such as morning and evening periods when people are traveling to work and school. Local access to all parcels and residences will be maintained throughout the project. Planned closures and detours will be coordinated with local residents, the public and emergency service providers.
- Disposal of existing asphalt and concrete will comply with applicable laws, rules and regulations, including the Montana Solid Waste Management Act. Disposal or utilization will not place removed bituminous pavement in areas exposed to extended periods of water flow, in or near standing water, or close to groundwater wells.
- The contractor will obtain air quality permits from the Montana Department of Environmental Quality. Dust will be controlled by watering or other acceptable methods.

3.21 Secondary and Cumulative Impacts

The analysis of cumulative impacts associated with any project includes an examination of the incremental impacts of the proposed action when added to the past, present and reasonably foreseeable impacts of other actions within the study area. For purposes of this cumulative analysis, a study area of approximately 3.2 kilometers (2 miles) north and south of the project was established. The eastern boundary is formed by I-90, and the western boundary by MT-85. The study area encompasses the rural area that lies between the long established cities of Bozeman and Belgrade, which represent a more urbanized environment.

3.21.1 LAND USE

The primary change that has occurred in this area over the past ten years has been the growth in residential development. Census data shows an increase in housing units between 1990 and 2000 of 149 percent in this study area. Gallatin County, the City of Belgrade and the City of Bozeman have worked together to coordinate review for proposed subdivisions and have adopted guidelines for the growth in this area. Proposed development is subject to review by these local authorities in order to insure that new growth occurs within the parameters established for this area. The only definite plans for housing development in this area are the final phases for the Wiley Creek subdivision and the Valley Grove subdivision which are already under construction. Reasonably foreseeable projects would include those which have been approved for development. As of this writing, there has been some discussion about development near the MT-85 junction, but no specific plans have been approved.

Predicting the effect of adding shoulders to an existing two-lane roadway along with left-turn bays at up major intersections on area growth and development is at best an imprecise exercise. There are many complex factors that can interact in unpredictable ways. Some of these include availability of jobs, the cost of gasoline, quality of schools, availability of utilities and services, policies of local governments, property tax rates, interest rates, scenery, and the national and local economy. For example, after building the interstate highway in eastern Montana in the 1960s and 1970s, some areas which had access to the new facility, actually lost population, due in part to a changing regional economy and the growth in the City of Billings which became a regional center. This project, which is to improve an existing two-lane roadway without any increase in travel lanes, is much less likely to induce growth than the construction of a new transportation facility. It is recognized that growth and development are subject to much more complex phenomenon than improvements to an existing road.

3.21.2 TRANSPORTATION

The transportation projects that are within the cumulative study area for this project include several safety improvement projects. The Montana Department of

Transportation is planning to add left-turn bays at selected locations along MT-85, as well as refurbish the pavement surface. Other scheduled transportation improvements in the area include minor safety and refurbishment projects, including selected locations for left turn bays and roadway resurfacing. No projects are scheduled within the cumulative study area that would provide additional capacity, i.e. additional lanes, to the roadways.

3.21.3 IMPACTS

No-Action Alternative. The No-Action Alternative will not have secondary or cumulative impacts in the study area.

Preferred Alternative. The incremental impacts of this project, when added to past, present and reasonably foreseeable projects in the area, are not expected to result in a significant cumulative impact. The impacts directly associated with the project will be subject to mitigation measures, as described in this document. The impacts associated with future projects will be addressed through the permitting process established by the federal, state and local authorities, wherever applicable.

3.21.4 MITIGATION

Mitigation for the direct impacts of this project are listed within the various resource sections in this document and summarized in the tables at the conclusion of this chapter. It is unlikely that the project will result in significant incremental impacts to the cumulative scenario, and therefore, no mitigation measures have been identified for secondary and cumulative impacts for this project.

3.22 PERMITS REQUIRED

These permits may be required for the Preferred Alternative and, if so, will be obtained prior to construction.

- A **SPA124 Stream Protection Permit** will be required by Montana Department of Fish, Wildlife and Parks.
- A **Section 402/Montana Pollutant Discharge Elimination Permit** from the Montana Department of Environmental Quality's Permitting and Compliance Division.
- A **Section 404 Permit** from the US Army Corps of Engineers (USCOE). The USCOE will be notified that the proposed action qualifies for a "Nationwide Permit" under the provisions of 33 CFR 330.
- All work will be in accordance with the Water Quality Act of 1987 (P.L. 100-4), as amended.

- A **National Pollutant Discharge Elimination System (NPDES) Permit** for control of water pollution and to assure quality of storm water runoff.
- Other local permits for utilities.

3.23 Summary of Impacts

Table 3-9 summarizes the impacts of the No-Action and Preferred Alternatives for each of the categories discussed in this chapter.

Table 3-9
Summary of Impacts

Category	No-Action	Preferred Alternative
Land Use	No impact.	Consistent with planned development.
Farmland	No impact.	Affect both Prime and Unique and farmland of statewide and local importance. Farmland conversion rating is below the threshold of 260 points.
Right-of-Way	No impact.	Acquisition of approximately 16 hectares (39 acres) effecting 98 parcels.
Social	No impact.	No impacts to neighborhood, schools, communities, churches, or minority neighborhoods. Safety improvements for school buses and ped/bike travel.
Environmental Justice	No impact.	No disproportionate impacts to minority or low-income groups or areas.
Economic	Traffic delays, increased accidents	Short-term increase in construction jobs. No long-term impacts.
Visual	No impact.	Short-term construction impacts, long-term expanded pavements, grade changes, loss of vegetation, bike path, and possibility of lighting at signalized intersection.
Historical and Cultural Resources	No impact.	Impacts to four properties eligible for National Register of Historic Places. SHPO determination of "No Adverse Effect."
Parks and Recreation/4(f)&6(f)	No impact.	Impacts to four parcels identified as parkland. No 6(f) properties
Pedestrian and Bicyclists	No impact.	Addition of ped/bike pathway either as separate path, or as attached sidewalk.

Table 3-9 (continued)
Summary of Impacts

Category	No-Action	Preferred Alternative
Noise	Increase in noise levels due to traffic increase. Less than 13 dB(A).	Increase in noise levels due to traffic increase. Less than 13 dB(A).
Air Quality	No impact.	Short-term dust from construction. No long-term impacts.
Water Quality	No impact.	Increase in sedimentation due to construction, long-term impacts associated with increased paved surface and increased runoff.
Floodplains	No impact.	No encroachment to delineated floodplains.
Wetlands	No impact.	Impacts to 0.17 hectare (0.42 acres) of jurisdictional wetlands. Total impacts to 0.27 hectare (0.66 acre) of wetlands.
Terrestrial and Biological Resources	No impact.	Vegetation disturbed. No sensitive species directly impacted. Increase in habitat fragmentation
Aquatic Resources	No impact.	No rare or sensitive species. Some mortality will occur with construction. Increased road runoff into streams.
Threatened or Endangered Species	No impact.	No threatened, endangered, or proposed for listing species were observed in the study area.
Hazardous Waste	No impact.	No impacts.
Construction	No impact.	Short-term impacts to noise, vibration, air quality, traffic, waste disposal, visual, erosion and sedimentation.
Secondary and Cumulative Impacts	No impact.	No impacts.

3.24 Summary of Mitigation Measures

Table 3-10 summarizes the mitigation measures for the Preferred Alternative.

Table 3-10
Summary of Mitigation Measures

Category	Preferred Alternative
Land Use	No mitigation required.
Farmland	No mitigation required.
Right-of-Way	ROW acquisition will conform with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (1989).
Social	No mitigation required.
Environmental Justice	No mitigation required.
Economic	No mitigation required.
Visual	No mitigation required.
Historical and Cultural Resources	SHPO determination of "No Adverse Effect." Fencing will be replaced in kind.
Parks and Recreation/6(f)	Improved access to parkland with pedestrian/bike path.
Pedestrian and Bicyclists	Improved access with pedestrian/bike path.
Noise	No mitigation required.
Air Quality	No mitigation required.
Water Quality	Comply with Clean Water Act Section 404 and 401 permit requirements and Montana Stream Protection Act 124 conditions. Use Best Management Practices during construction. Prompt revegetation.
Floodplains	Culverts/bridges designed to 25-year flows with no overtopping of road.
Wetlands	Jurisdictional wetland impacts will be mitigated as required by the Army Corps of Engineers under Section 404 permit.
Terrestrial and Biological Resources	Replanting of disturbed areas. Survey for raptor nests. Raptor proof relocated power poles.
Aquatic Resources	For fish passage, larger culverts and bridges will be installed where appropriate.
Threatened or Endangered Species	Raptor proofing of relocated power poles.
Hazardous Waste	No mitigation required.
Construction	Standard control measures for MDT projects will be enforced.
Secondary and Cumulative Impacts	No mitigation required.

CHAPTER 4.0: SECTION 4(f) EVALUATION

Title 49 USC 303 (also 23 USC 138) states that "The Secretary may approve a transportation program or project (other than any project for a park road or parkway under Section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance, or land of a historic site of national, state, or local significance, as determined by the federal, state, or local officials having jurisdiction over the park area, refuge or site only if a determination is made that:

1. there is no prudent or feasible alternative to using that land; and
2. the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

The following discussion refers only to those particular properties, adjacent to the project corridor, which are considered to be 4(f) properties. The potential impacts that may occur as a result of the implementation of the Preferred Alternative are identified for each location. The first portion of this chapter, Section 4.1, provides a short description of the historic properties and park properties adjacent to Secondary Road 235-East Valley Center Road, followed by a description, in Section 4.2, of the anticipated impacts to these properties based on preliminary design. The other sections included in this chapter are as follows: Section 4.3-Classification of Impacts, Section 4.4-Feasible or Prudent Alternatives, Section 4.5-Measures to Minimize Harm, Section 4.6-Coordination, and Section 4.7-the Section 4(f) Conclusion.

4.1 SECTION 4(f) PROPERTIES

There are a total of seven Section 4(f) sites located adjacent to the East Valley Center Road, which are likely to be impacted by the Preferred Alternative. Four of these sites are historic properties eligible for the National Register for Historic Places (NRHP) and three are publicly controlled parkland sites.

4.1.1 HISTORIC PROPERTIES

Dykstra Homestead
The Dykstra Homestead is located just south of East Valley Center Drive, about 0.6 kilometer (0.4 mile) east of Montana 85. There are ten features at the site, including a house, a large historic barn, and eight smaller outbuildings. The house, barn, and four of the outbuildings appeared to be over 50 years old.

The house is a wood-framed vernacular structure, reportedly dating from the 1930s and displaying an unusual, wraparound front porch. It appears to retain a relatively high level of historic integrity. The nearby barn (also built in the 1930s) is easily the largest and most imposing building at the site; it is a wood-framed, gambrel-roofed structure

with a complex fenestration pattern and excellent integrity. All remaining buildings and structures at the site are relatively small and unobtrusive, and are of vernacular design.

This property is eligible for the National Register of Historic Places with local significance under criterion "c". Both major buildings at the farmstead-the house and the barn-are historic structures displaying representative period designs and retaining a high level of historic integrity.

Sheldon Barn
The Sheldon barn is located on the north side of East Valley Center Drive, about 5.5 kilometers (3.4 miles) east of Montana 85. The site consists of a single building: a relatively small gambrel-roofed barn construction of milled logs. Based on its 2001 appearance, the barn my date from about the 1930s. The barn retains a high level of architectural integrity.

This barn is eligible for the National Register of Historic Places with local significance under criterion "c". The barn retains a very high level of historic integrity, and is a well-crafted example of locally unusual design. Relatively few log barns exist in the Gallatin Valley, and most are smaller, gable-roofed structures dating from the nineteenth century.

Cawlfield Homestead
The Cawlfield homestead is located just south of East Valley Center Drive, approximately 6.4 kilometers (4 miles) east of Montana 85. There are six features at the site, including a house, a large barn, a garage, and three chicken coops. All of the buildings are over 50 years old.

The house is a large, 1 1/2-story wood-framed structure, reportedly dating from about 1929. It displays elements of the Craftsman architectural style in its form, detailing, and window arrangement. The house retains a relatively high level of historic integrity, although a formerly open porch has been enclosed and a small number of modern windows are present. The adjacent barn (also ca. 1929) is a large "L"-shaped structure, wood-framed and sided, and with a gable roof. The barn displays a very high level of historic integrity. The remaining buildings are small vernacular structures, visually compatible with the house and the barn.

This property is eligible for the National Register of Historic Places with local significance under criterion "c". Both major buildings at the farmstead-the house and the barn-are historic structures displaying representative period design and retaining a high level of historic integrity. The barn, in particular, is a large and well-crafted example of its design type.

Lindekugel Homestead
The Lindekugel homestead is located on the north side of East Valley Center Drive, about 6.9 kilometers (4.2 miles) east of Montana 85. There are three historic features at the site, including a house, a barn, and a shed, all of which are over 50 years old.

The house is a large, 2 1/2-story wood-framed structure, reportedly dating from ca. 1918. It displays numerous elements of the Craftsman architectural style, including a prominent center dormer and bracketed roof eaves. The house retains a generally high level of historic integrity, although a small addition is present and a formerly open inset front porch has been enclosed.

The barn at the Lindekugel farm (ca. 1904) is a very large rectangular structure, wood-framed and sided, and with a gambrel roof. The barn displays a very high level of historic integrity, and is among the largest and most visually imposing historic buildings in the central Gallatin Valley.

The barn is architecturally significant because it is a prime example of a Dutch gambrel barn. Primarily due to the architectural significance of the barn, this property is eligible for the National Register under criterion “c”.

The locations of these historic properties along East Valley Center Road are shown in **Figure 3-5** through **Figure 3-7** of this Environmental Assessment.

4.1.2 PARKLAND

Wylie Creek Subdivision
The parkland at Wylie Creek subdivision is located along East Valley Center Road about 2.3 miles east of MT 85. This land was granted and donated to Gallatin County for use of the public forever, and is controlled through a "use right". Through an agreement with the Homeowners Association (HOA), the HOA is responsible for maintenance and upkeep. The property is not fenced and is accessible to the public. There are no developed facilities on the property. It consists of a landscaped berm that serves as a buffer between the houses and the roadway and a roadside ditch that carries runoff along the roadway and beneath the subdivision entrance streets. The landscape treatment includes sod, trees and an irrigation system (see **Figure 4-1**). The park is used by the residents for activities such as dog walking and occasional sledding and is one of several “neighborhood parks” within the subdivision. The western-most parcel is also intended for use as a water retention facility during heavy rains. According to a homeowners’ board member, it has had water in it within the past four years.

Photo 1
Wylie Creek Subdivision Parkland

Photo 2
Landscape Berm at Wylie Creek Subdivision

The landscaping presently comes up to the edge of the existing roadway pavement. Some of the existing landscaped area is within right-of-way that has been dedicated for transportation.

Valley Grove Subdivision Phase 4
The site that is part of the Valley Grove Subdivision forms an open space area along MacDonald-Wiley Creek, north of East Valley Center Road about 2.1 miles east of MT 85. This land was granted and donated to Gallatin County for the use of the public forever as part of the subdivision approval and is protected by the County through a "use right". The maintenance of the parcels are currently the responsibility of the developer, but will be turned over to the Homeowners Association (HOA) when the build out of the subdivision is complete. The site is in a natural state with no developed facilities or trails (see **Figure 4-2**).

Shakira Subdivision
This parcel is located just west of Laden Lane on the south side of East Valley Center Road about 2.8 miles east of MT 85. The parcel sits between the back property line of the lots on Laden Lane and Aajker Creek. The parcel was granted and donated to the County use by the public forever as part of the subdivision approval. The site is in a natural state with no developed facilities or trails. The subdivision plan indicates a 5-foot path along the length of the parcel but at this time, no pathway has been developed. Once per year, the developer mows a strip through the grasses that can be used as a pathway, but no permanent path is apparent. A wooden sign has been placed at the north end of the lot which reads “Shakira Trail” (see **Figure 4-2**).

4.2 Description of Impacts to Section 4(f) properties

Direct impacts to a Section 4(f) property are a result of the purchase, lease, easement or agreement to change the use of all or a portion of the property. Direct conversion of use resulting from direct impact is one way a Section 4(f) property may be changed. Another way is through “constructive use”. A constructive use results from any action that substantially impairs a vital use of a 4(f) property. This can occur from noise impacts, visual impacts, major access impacts or ecological intrusion.

The impacts that are discussed for the following properties are based on the preliminary design available at the time of this writing.

4.2.1 HISTORIC SITES

Dykstra Homestead
Based on the preliminary design for the roadway improvements, which at this location includes paved shoulders, embankments, and a pedestrian/bike path along the south

Photo 1
Valley Grove Phase 4 Site
View Looking South Toward East Valley Center Road

Photo 2
Shakira Subdivision Site with Trail Sign
View Looking South from East Valley Center Road

side of the roadway, a portion of the property would need to be purchased for the project. The cross section proposed at this location is typical cross section number 1 which includes paved shoulders, sloped embankments and a 2-meter (6.5-foot) separation between the roadway and the pedestrian/bike path that runs along the south side of the roadway. No curb and gutter treatment is included as part of this proposed cross section. The new edge of right-of-way would be approximately 6.7 meters (22 feet) from the house, which is the structure nearest to the roadway. Some trees, which are currently located between the house and the roadway, would need to be removed as part of this project. The new edge of roadway pavement, which would be the edge of paved shoulder, will be approximately 21 meters (69 feet) from the house. None of the buildings on the site will be directly impacted by the project. Right-of-way acquisition at this location includes 1.7 hectares (4.2 acres) of the property. The total parcel is 150 hectares (260 acres).

The State Historic Preservation Officer (SHPO) has determined that there is "No Adverse Effect" to this property from the Preferred Alternative. (See concurrence letter dated August 6, 2002, in Appendix A.)

Sheldon Barn
Based on the preliminary design for the roadway, the new edge of right-of-way at this location will be approximately 1 meter (3 feet) from the Sheldon Barn building. The cross section proposed at this location is typical cross section number 1 that includes paved shoulders and sloped embankments with no curb and gutter treatment. The new edge of roadway pavement, which is the edge of shoulder, will be approximately 14 meters (46 feet) from the building. From edge of shoulder to edge of right-of-way there will be a sloped embankment and roadside ditch for runoff retention. There are no trees between the building and the roadway at present; therefore, no tree removal will be required at this location. The utility poles will be located along the north sides of the roadway within the public right-of-way. Right-of-way acquisition at this site will be 0.09 hectares (0.2 acres). The total parcel is 0.61 hectares (1.5 acres).

The SHPO has determined that there is "No Adverse Effect" to this property from the Preferred Alternative. (See concurrence letter dated August 6, 2002, in Appendix A.)

Cawlfield Homestead
The preliminary design for the roadway improvements include a minor infringement for right-of-way along the frontage of this property. The distance from the house structure, which is the structure nearest to the roadway, to the edge of the required right-of-way, is approximately 7.5 meters (25 feet). There is a grove of trees to the west of the house, some of which will be impacted by the project.

At this location the typical cross section number 4 is proposed which includes curb and gutter treatment on both sides of the roadway and a pedestrian/bike path immediately adjacent to the curb on the south side of the roadway. The distance from the house structure to the edge of the new roadway pavement is approximately 16.5 meters (54

feet). The distance from the edge of pavement to the edge of right-of-way includes space needed for sloped embankments and roadside ditches. Right-of-way acquisition at this site will be 0.3 hectares (0.7 acres). The total parcel is 32 hectares (79 acres).

The SHPO has determined that there is "No Adverse Effect" to this property from the Preferred Alternative. (See concurrence letter dated August 6, 2002, in Appendix A.)

Lindekugel Homestead
Based on the preliminary design information, the new right-of-way will be 7.0 meters (23 feet) from the nearest structure. The distance from the house to the edge of pavement, which is typical cross section number 4, with curb and gutter treatment, will be approximately 16 meters (52 feet). There are large trees along the front of the property at this site. Some of these trees may be impacted by the project. The right-of-way acquisition at this site will be 0.16 hectares (0.39 acres). The total parcel is 2.8 hectares (7.0 acres).

The SHPO has determined that there is "No Adverse Effect" to this property from the Preferred Alternative. (See concurrence letter dated August 6, 2002, in Appendix A.)

4.2.2 PARKLAND

Wylie Creek Subdivision
The preliminary design plans show a need for purchase of approximately 0.14 hectares (0.35 acres) of right-of-way within the landscaped park at the Wylie Creek subdivision. The total site is 1.5 hectares (3.7 acres) of which 9 percent would be needed for the project. The proposed typical cross section at this location is cross section number 3, which includes a curb and gutter treatment on the south side of the roadway with the pedestrian/bike path immediately adjacent to the curb. On the north side of the roadway, the proposed cross section includes a 2.8-meter (9-foot) shoulder with a sloped embankment.

The currently dedicated transportation right-of-way at this location is 27.4 meters (90 feet). The landscaping at this location currently abuts the existing pavement, therefore, some of the landscaping is within that transportation right-of-way. In addition to the acquisition of additional right-of-way at this site, some temporary construction impacts may occur outside of the acquired right-of-way. All temporary impacts will be mitigated with landscape replacement to the pre-impact condition. The existing roadside ditch will no longer be needed, as the roadway drainage will be carried by the curb and gutter. Any runoff from the berm towards the road will also be carried by this system. No facilities or activities will be affected by the project.

Noise impacts at the site will increase as a result of projected increased traffic on the roadway which is anticipated for both the No-Action Alternative and the Preferred Alternative. Projected noise impacts will not approach or exceed the FHWA and MDT NAC standards. Visual impacts will include a widened pavement surface along the

corridor. No visual obstruction to the site will occur. Views from the site to the surrounding area will not be affected. Pedestrian/bike access to the site will be improved with the addition of a pathway. No change in auto access would occur. For these reasons, this is not a constructive use of this property.

Valley Grove Phase 4
Based on preliminary design, approximately 0.04 hectare (0.1 acre) of land will be acquired from this site, which consists of four parcels for a total of 2.67 hectares (6.6 acres). The acquisition constitutes a purchase of one percent of the site. Typical cross section number 3 is proposed at this location, which includes two travel lanes, a shoulder and embankment treatment along the north side of the roadway and a curb and gutter treatment along the south side. A pedestrian/bike path will be constructed along the south side, adjacent to the paved surface. Temporary construction impacts may occur outside of the proposed right-of-way. Disturbed vegetation will be replaced with natural grasses. No facilities or activities will be affected by the project.

Noise impacts at the site will increase as a result of projected increased traffic on the roadway which is anticipated for both the No-Action Alternative and the Preferred Alternative. Projected noise impacts will not approach or exceed the FHWA and MDT NAC standards. Visual impacts will include a widened pavement surface along the roadway. No visual obstruction to the site will occur. Views from the site to the surrounding area will not be affected. Access to the site will be improved with the addition of a pedestrian/bike path. No change in auto access would occur. For these reasons, this is not a constructive use of this property.

Shakira Subdivision
Based on the preliminary design, approximately 0.01 hectare (0.02 acre) of this 0.84 hectare (2.09 acre) parcel would be acquired. This acquisition constitutes a purchase of one percent of the total site. Typical cross section number 1 is proposed at this location, which includes two travel lanes, shoulders, embankments and roadside ditches. A pedestrian/bike path will be constructed along the south side of the roadway within the proposed public right-of-way. Temporary construction impacts may occur outside of the proposed right-of-way. Disturbed vegetation will be replaced with natural grasses. No facilities or activities will be affected by the project.

Noise impacts at the site will increase as a result of projected increased traffic on the roadway which is anticipated for both the No-Action Alternative and the Preferred Alternative. Projected noise impacts will not approach or exceed the FHWA and MDT NAC standards. Visual impacts will include a widened pavement surface along the roadway. No visual obstruction to the site will occur. Views from the site to the surrounding area will not be affected. Access to the site will be improved with the addition of a pedestrian/bike path. No change in auto access would occur. For these reasons, this is not a constructive use of this property.

4.3 Classification of Impacts

The impacts to these Section 4(f) properties have been reviewed and a determination has been made that the impacts fall within the classification of a Programmatic Section 4(f) evaluation. The reasons for this determination are:

- The Preferred Alternative is designed to improve the operational characteristics, safety and physical condition of an existing roadway facility on essentially the same alignment.
- The affected Section 4(f) sites involved are publicly owned parks or historic sites located adjacent to the existing roadway.
- The amount and location of the Section 4(f) lands to be impacted would not impair the use of the remaining Section 4(f) land, in whole or in part.
- The parkland to be acquired is less than ten percent of the total size of the site.
- The proximity impacts of the Preferred Alternative on the remaining Section 4(f) land do not impair the use of the land for its intended purpose.
- The impact on the Section 4(f) potential historic sites resulting from the use of the land is considered to be minor. The word minor is narrowly defined as having a "no effect" or "no adverse effect" on the qualities, which qualified the site for listing or eligibility on the National Register for Historic Places.
- The State Historic Preservation Officer (SHPO) has agreed, in writing (letter contained in Appendix A), with the assessment of the impacts of the Preferred Alternative and the proposed mitigation for the historic sites.
- Gallatin County has expressed conceptual concurrence, in writing (letter contained in Appendix A), with the assessment of the impacts and with the proposed mitigation.

A Section 4(f) Programmatic Evaluation form for each site is included in Appendix B.

4.4 Feasible or Prudent Alternatives

4.4.1 NO-ACTION ALTERNATIVE

The No-Action Alternative would leave the roadway in its current condition with no shoulders or bridge widening. This option would not meet purpose and need and would not include the safety improvements developed in response to accident rates. This alternative would not have environmental impacts to the surrounding landscape. A delay in travel time is likely to occur on the eastern portion of the project area as traffic volumes and turning movements increase.

4.4.2 IMPROVEMENTS WITHOUT USING THE ADJACENT SECTION 4(f) PROPERTIES

At the Dykstra Homestead, the roadway would need to be shifted to the north in order to avoid any impacts to the property. This would likely result in additional impacts to farmland on the north side of the road and to the irrigation ditch in this area. It would also result in a reverse curve in the roadway, creating a potential safety hazard for the motorist. In order to reduce the impacts to this property, the cross section would need to be reduced, resulting in additional project cost and an unexpected change in treatment creating a potential safety hazard for the traveling public.

At the Sheldon Barn, the roadway would need to be shifted further to the south to avoid any impacts to the property. This would likely result in greater impacts to farmland on the south side and to the wetlands along Baxter Creek, which is in the area. This option would also result in a reverse curve in the roadway, creating potential safety hazards for the traveling public.

At Cawlfield Homestead, the roadway would need to be shifted to the north in order to avoid any impacts to the property. This would result in impacts to private residential property on the north side of the roadway and possibly to Spring Creek, which is near this site. Shifting the roadway alignment at this location would result in a reverse curve, creating potential safety hazards for the traveling public.

At the Lindekugel Homestead, the roadway would need to be shifted to the south in order to avoid impacts to this property. This would result in impacts to private residential property on the south side of the roadway. Shifting the roadway would also result in a reverse curve, creating potential safety hazards for the traveling public.

At the Wiley Creek Subdivision parkland the roadway would need to be shifted to the north to avoid any impacts to the property. This would result in impacts to private residential property on the north side of the road as well as to the parkland at the Valley Grove Phase 4 site. The residences are in close proximity to the roadway and a shift in alignment might cause the need for relocations. Shifting the roadway would also result in a reverse curve, creating potential safety hazards for the traveling public.

At the Valley Grove Phase 4 site, the cross section would need to be modified or the roadway shifted to the south in order to reduce the impacts. A change in treatment would result in additional project cost and an unexpected change in roadway configuration creating a potential safety hazard. A shift in alignment to the south would result in additional impacts to the Wiley Creek parkland site.

At the Shakira Subdivision site, the cross section would need to be modified or the roadway shifted to the north in order to reduce the impacts. A change in treatment would result in increased project cost and an unexpected change in roadway configuration which would result in potential hazard for the traveling public. A shift in

alignment to the north would result in a reverse curve, creating potential safety hazard for the traveling public.

4.4.3 ALTERNATIVE ON NEW LOCATION (OFF-ALIGNMENT ALTERNATIVE)

An alternative alignment on a new right-of-way (not using the existing roadway alignment) would require additional right-of-way acquisition. In order to serve the projected traffic for the corridor, the new alignment would need to be in reasonably close proximity to the existing roadway. There are 4(f) properties on both the north and south sides of the roadway; therefore, a new alignment would not avoid all of them. Depending on the exact location of a new alignment, there may be impacts to historic structures that exist on both sides of the roadway. Impacts to prime and unique farmlands, relocations, noise impacts to residences, wildlife impacts, and visual impacts would likely be greater with a new alignment. For these reasons, an alternative alignment was not considered to be prudent or feasible.

4.5 MEASURES TO MINIMIZE HARM

4.5.1 HISTORIC PROPERTIES

Consultation with the cultural resources historian was held concerning the historic properties subject to Section 4(f) legislation. Agreement has been reached to provide the following mitigation:

- At the east end of the project, at the location of the Lindekugel and Cawlfield Homesteads, the proposed cross section is a curb and gutter treatment, which serves to minimize impacts to these properties.
- At the Sheldon Barn site, the Preferred Alternative centerline has been located south of the existing centerline in order to minimize the impacts to this property.

4.5.2 PARKLAND

Consultation with Gallatin County has occurred concerning the sites granted and donated to the County for public use that are currently accessible to the public.

- At the Wiley Creek subdivision neighborhood park, the proposed cross section is curb and gutter treatment, which serves to minimize impacts to this site. The cross section also includes a pedestrian/bike path that will provide improved access to this location.
- The proposed pedestrian/bike path will also provide improved access to the Valley Grove Phase 4 site and the Shakira site and will connect with other planned trails in the area.

4.6 Coordination

Coordination related to the historic sites and park sites has occurred with the agencies having jurisdiction over the Section 4(f) properties and includes:

- Consultation with Gallatin County concerning sites along the corridor that have been granted and donated to the County for public use. The County has expressed conceptual concurrence, in writing, in a letter dated August 1, 2002 (see Appendix A).
- Consultation with the State Historic Preservation Officer has occurred regarding the impacted historic sites. A letter from the SHPO, with a concurrence dated August 6, 2002, finds that there is No Adverse Effect to the historic properties due to the project (see Appendix A).

4.7 Conclusion

Based upon the above considerations, there is no feasible or prudent alternative to the use of the land from the Section 4(f) properties and the proposed action includes all possible planning to minimize harm to the Section 4(f) properties from such use.

Chapter 5.0

CHAPTER 5.0: COMMENTS AND COORDINATION

5.1 Public Involvement Activities

Public Open House. A public informational meeting was held on June 19, 2001, from 5:00 p.m. to 8:00 p.m. at the Wingate Inn in Bozeman, Montana. A short formal presentation was made at 7:00 pm. Personal letters were sent to each of the abutting landowners along the project area notifying them of this meeting. Over 100 people were in attendance at this meeting. Mr. Jim Weaver gave a brief presentation including the following points:

- A draft EA should be done by next summer.
- Staff will meet with individual property owners along East Valley Center Road.
- The project covers the area from the junction of MT-85 to the I-90 underpass.
- Plan is for a two-lane road with paved shoulders and left-turn bays at major intersections.
- The roadside ditches will be filled in or relocated.
- Additional right-of-way will be needed.
- If a bike path is built, it will be along the south side.
- All irrigation ditches will be perpetuated and irrigation lines replaced.
- Curb and gutter cross section will be used on the east end to minimize right-of-way.
- Streetlight may be placed at major intersections.
- Tentative construction date is year 2005.

During the comment period the public expressed concerns about the following areas:

- Amount of right-of-way needed
- Construction impacts and use of road during construction
- Noise concerns
- Speed limit increase; safety concerns with children crossing road.
- Drainage in this area; water overtops road at times.
- Effects to ditches
- Fence replacement
- Historic structure east of Hidden Valley Road

Public Hearing. A public hearing will be held to receive comments on the Environmental Assessment.

5.2 List of Agencies with Jurisdiction and/or Permits Required

The following permits or coordination would be required for the Preferred Alternative and would be obtained prior to any disturbance:

- **U.S. Army Corps of Engineers**
  Section 404 Permit. MDT must obtain a Clean Water Act: Section 404 Permit from the Corps of Engineers.
- **Montana Department of Environmental Quality, Water Quality Division**
  Section 402 NPDES/MPDES Permit. The MDEQ Water Quality Division would review plans and specification relative to erosion control or a storm water discharge permit. A Storm Water Erosion Control Plan would be developed for the project.
- **Montana Department of Environmental Quality, Water Quality Division**
  3A Authorization. This authorization must be obtained from the MDEQ Water Quality Division for construction activities that may cause unavoidable short-term violations of state surface water quality standards for turbidity, total dissolved solids, or temperature.
- **Montana Department of Fish, Wildlife, and Parks**
  124 Stream Protection Act Permit. This permit is needed from the Montana Department of Fish, Wildlife and Parks to maintain the quality of streams and fisheries affected by highway-related construction.

5.3 Coordination with Agencies, Groups or Persons

Coordination with the following agencies, groups or persons has occurred:

- Bozeman Fire Department
- City of Bozeman
- City of Belgrade
- Developer of Valley Grove Subdivision
- Developer of Shakira Subdivision
- Homeowner's Association Board Member for Wiley Creek Subdivision
- Gallatin County
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Transportation
- State Historic Preservation Office
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture

Appendix A

Appendix A:
Agency Correspondence

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request	2-6-02
Name Of Project	JCT MT-85-East (Bozeman)	Federal Agency Involved	FHWA
Proposed Land Use	Road Widening	County And State	Gallatin, MT
PART II (To be completed by NRCS) ✓		Date Request Received By NRCS	2-8-02 (NEEDED MORE INFO)

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).	Yes ☒	No ☐	Acres Irrigated 166.51	Average Farm Size —

Major Crop(s)	Farmable Land In Govt. Jurisdiction	Amount Of Farmland As Defined in FPPA
ALFALFA, BARLEY & WHEAT	Acres: 0 %	Acres: %
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS
(NONE) USED SOIL SURVEY	(NONE) USED SOIL SURVEY	2/28/02

PART III (To be completed by Federal Agency)	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	44.45			
B. Total Acres To Be Converted Indirectly	122.06			
C. Total Acres In Site	~~0~~ 166.51	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information ✓				
A. Total Acres Prime And Unique Farmland	87.84			
B. Total Acres Statewide And Local Important Farmland	17.16			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	N/A			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	—			
PART V (To be completed by NRCS) Land Evaluation Criterion ✓ Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	~~0~~ N/A	0	0	0

PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))	Maximum Points				
1. Area In Nonurban Use	15	14			
2. Perimeter In Nonurban Use	10	8			
3. Percent Of Site Being Farmed	20	15			
4. Protection Provided By State And Local Government	20	20			
5. Distance From Urban Builtup Area	N/A	15			
6. Distance To Urban Support Services	N/A	10			
7. Size Of Present Farm Unit Compared To Average	10	5			
8. Creation Of Nonfarmable Farmland	25	5			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	10			
11. Effects Of Conversion On Farm Support Services	25	0			
12. Compatibility With Existing Agricultural Use	10	5			
TOTAL SITE ASSESSMENT POINTS	160	0 ~~112~~	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	0 ~~112~~	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	0 ~~112~~	0	0	0

Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

NO LAND EVALUATION CRITERION IN PLACE IN GALLATIN COUNTY.

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 – NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step '4 – In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 – NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.

2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will, be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A."}$$

20020724078 Y/3

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

RECEIVED
AUG 0 8 2002
ENVIRONMENTAL

RECEIVED
25
BY

RECEIVED
BY:

July 23, 2002

Mark Baumler
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: STPS 235-1(8)0
JCT. U.S. 191 - West
Control No. 4470

Enclosed is the Determination of Effect for the above project in Gallatin County. We have determined that the proposed roadway reconstruction project would have **No Adverse Effect** to the Dykstra Homestead (24GA729), Sheldon Barn (24GA730), Cawlfield Homestead (24GA733) and the Lindenkugel Homestead (24GA734) for the reasons specified in the document. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

CONCUR
MONTANA SHPO
DATE 6 Aug 02 SIGNED

Enclosure

cc: Jason Giard, P.E., Butte District Administrator
Carl Peil, P.E., Preconstruction Bureau
Gordon Stockstad, Resources Section

Environmental Services Unit
Phone: (406) 444-7228
Fax: (406) 444-7245

Web Page: www.mdt.state.mt.us
Road Report: (800) 226-7623
TTY: (800) 335-7592

Carter::Burgess

216 16th Street, Suite 1700
Denver, Colorado 80202
Phone: 303.820.5240
Fax: 303.820.2402
www.c-b.com

July 18, 2002

Mr. Lee Provance
Road and Bridge Superintendent
Gallatin County
201 West Tamarac
Bozeman, MT 59715

Re: East Valley Center Road Project
Section 4(f) Evaluation

Dear Mr. Provance:

Carter & Burgess is preparing the Environmental Assessment for the East Valley Center Road widening project. As part of the environmental documentation, and the Section 4(f) evaluation, we are requesting concurrence from the County, as the agency with jurisdiction, regarding the impacts and mitigation measures at several park sites along the corridor. Your concurrence will indicate that the assessment of impacts is appropriate and that the commitments for mitigation are acceptable. This concurrence letter will be included in the Environmental Assessment that will be distributed to the public prior to holding a public hearing on the project. Comments from the citizens along the corridor will be received at the public hearing and will be taken into consideration by MDT and FHWA in their review of the project. No final decision on the project will be made until after public comment is received.

Included with this letter are the following supporting items:

1. Summary of project impacts and mitigation at the park locations
2. Typical cross-section graphics
3. Plan sheets for the portions of the project that affect the park sites.

If you have any questions about the engineering design for the project, please contact Mr. Jim Weaver, WGM Group, at 406-728-2476. If you have any questions regarding the environmental process, please contact me at 720-359-3078.

Sincerely,

Sandi C. Kohrs
Senior Planner

cc: File #070789300
Jim Weaver, WGM Group

Enclosures

I concur with the assessment of impacts and the commitments to mitigation, summarized in the attachments, for the East Valley Center Road project. AS THESE PARKS ARE UNDER THE JURISDICTION AND OWNERSHIP OF THE HOMEOWNERS ASSOCIATIONS WE CAN ONLY GIVE CONCEPTUAL CONCURRANCE.

_____ Date 8/1/02

LEE PROVANCE, GALLATIN COUNTY ROAD + BRIDGE SUPERINTENDENT

J:_Transportation\070789.300.1.0001\manage\corr\ConcurLtr_Gallatin.doc

REPLY

United States Department of the Interior

FISH AND WILDLIFE SERVICE
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.44 MDT (I)

August 3, 2001

Leanne Roulson
Garcia and Associates
151 Evergreen Drive, Suite B
Bozeman, Montana 59715

Dear Ms. Roulson:

This is in response to your letter dated July 5 regarding a proposal by the Montana Department of Transportation to reconstruct approximately 11 kilometers of East Valley Center Road (Jct. MT 85 East - Belgrade; STPS 235-1(8)0; Control No. 4470) in Gallatin County, Montana. Your letter requested information the US Fish and Wildlife Service (Service) may have pertaining to threatened and endangered (T/E) species that may occur in the vicinity of the proposed project. The Service's Montana Field Office received your letter on July 17. These comments have been prepared under the authority of, and in accordance with, the provisions of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et.seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.).

A map was not received with your correspondence, so the exact location of the proposed project was difficult to discern. The species listed below are more likely to occur near larger streams, and were included in case the project occurs in proximity to the Gallatin River. In accordance with section 7(c) of the Act, the Service has determined that the following threatened, endangered, proposed and candidate species may be present in the project area:

Listed Species	Expected Occurrence
bald eagle (*Haliaeetus leucocephalus*); threatened	spring or fall migrant; winter resident
Ute Ladies'-tresses (*Spiranthes diluvialis*); threatened	river meander wetlands

Section 7(c) of the Act requires that Federal agencies proposing major construction activities complete a biological assessment to determine the effects of the proposed actions on listed and proposed species and use the biological assessment to determine whether formal consultation is required. A major construction activity is defined as "a construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act (NEPA)" (50 CFR Part 402). If a biological assessment is not required (i.e. all other actions), the Federal agency is still required to review their proposed activities to determine

whether listed species may be affected. If such a determination is made, formal consultation with the Service is required.

For those actions wherein a biological assessment is required, the assessment should be completed within 180 days of initiation. This time frame can be extended by mutual agreement between the Federal agency or its designated non-Federal representative and the Service. If an assessment is not initiated within 90 days, this list of threatened and endangered species should be verified with the Service prior to initiation of the assessment. The biological assessment may be undertaken as part of the Federal agency's compliance of section 102 of NEPA and incorporated into the NEPA documents. We recommend that biological assessments include the following:

1. A description of the project.
2. A description of the specific area that may be affected by the action.
3. The current status, habitat use, and behavior of T/E species in the project area.
4. Discussion of the methods used to determine the information in Item 3.
5. An analysis of the affects of the action on listed species and proposed species and their habitats, including an analysis of any cumulative effects.
6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to T/E species.
7. The expected status of T/E species in the future (short and long term) during and after project completion.
8. A determination of "is likely to adversely affect" or "is not likely to adversely affect" for listed species.
9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species.
10. Citation of literature and personal contacts used in developing the assessment.

If it is determined that a proposed program or project "is likely to adversely affect" any listed species, formal consultation should be initiated with this office. If it is concluded that the project "is not likely to adversely affect" listed species, the Service should be asked to review the assessment and concur with the determination of no adverse effect.

A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare biological assessments. However, the ultimate responsibility for Section 7 compliance remains with the Federal agency and written notice should be provided to the Service upon such a designation. We recommend that Federal agencies provide their non-Federal representatives with proper guidance and oversight during preparation of biological assessments and evaluation of potential impacts to listed species.

Section 7(d) of the Act requires that the Federal agency and permit/applicant shall not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives until consultation on listed species is completed.

Any power lines in the vicinity, if not properly constructed, could pose electrocution hazards for bald eagles. To conserve this species, and other large raptors protected by Federal law, we urge that any power lines that need to be modified or reconstructed as a result of this project be raptor-proofed following the criteria and techniques outlined in the publication, "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996." A copy may be obtained from: Jim Fitzpatrick, Treasurer, Carpenter Nature Center, 12805 St. Croix Trail South, Hastings, MN 55033. The use of such techniques would likely be most beneficial adjacent to expected raptor foraging areas (i.e. stream crossings or wetlands that support populations of waterfowl).

Information accompanying your letter indicates that the existing bridge over Middle Creek is proposed to be replaced with either a new single span bridge or a double box culvert. To facilitate the movement of bedload and debris, more easily accommodate flood flows, and preserve the integrity of the stream channel and riparian zone along Middle Creek, the Service advocates the construction of a single span bridge if at all feasible. Although not a concern for listed species at this location, clear span bridges allow for more naturally functioning and intact stream channels and riparian areas that, in turn, facilitate the movement of aquatic and terrestrial species and foster overall stream health, thereby benefitting numerous species.

Your letter does not mention whether wetlands might be impacted by the proposed construction project. If so, Corps of Engineers (Corps) Section 404 permits may eventually be required. In that event, depending on permit type and other factors, the Service may be required to review permit applications and will recommend any protection or mitigation measures to the Corps as may appear reasonable and prudent based on the information available at that time.

If you have questions regarding this letter, please contact Mr. Scott Jackson, of my staff, at the address above or by phone at (406) 449-5225, ext. 201.

Sincerely,

R. Mark Wilson

R. Mark Wilson
Field Supervisor

Appendix B:
Programmatic Section 4(f) Evaluation

MONTANA DIVISION

"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: DYKSTRA HOMESTEAD

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	☒
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	☐	☒
4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)?	☒	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? **(See Appendix A--concurrence dated August 6, 2002.)**	☒	☐
6. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
7. Is the proposed project on a new location?	☐	☒
8. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

ALTERNATIVES CONSIDERED

1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐

	YES	NO

ALTERNATIVES CONSIDERED (continued)

2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. ☒ ☐
   Shifting the improvement north would result in additional impacts to farmland and an irrigation ditch. It would also result in a reverse curve, creating a potential hazard for the motorist.
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. ☒ ☐
   An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.

   Descriptions are detailed above.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. ☒ ☐
2. Measures to minimize harm include the following:

   a) A pedestrian/bike path will be provided with this project and will improve access to the site.

COORDINATION

1. The proposed project has been coordinated with the following.

   a) SHPO (date: **August 6, 2002**) ☐ ☐

   b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) (date:) ☐ ☐
   ACHP coordination was not required since the proposed project would have no adverse effect on the site.

   c) Property owner ☐ ☐
   The property owner will be contacted as part of the right-of-way acquisition process.

   d) Local/State/Federal agencies ☐ ☐
   SHPO

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:
   SHPO comments: Concurrence with MDT finding of No Adverse Effect to the sites.

SUMMARY

All required ALTERNATIVES have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" Section 4(f) evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Date: 11/27/02

Approved: _____
Federal Highway Administration

Date: 1/27/03

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION

"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: SHELDON BARN

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	☒
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	☐	☒
4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)?	☒	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? **(See Appendix A--concurrence dated August 6, 2002.)**	☒	☐
6. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
7. Is the proposed project on a new location?	☐	☒
8. The Scope-of-Work for the proposed project is one of the following: a) Improved traffic operation; b) Safety improvements; c) 3R; d) Bridge replacement on essentially the same alignment; or e) Addition of lanes.	☒	☐

ALTERNATIVES CONSIDERED

1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐

	YES	NO

ALTERNATIVES CONSIDERED (continued)

2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. ☒ ☐
   Shifting the improvement farther to the south would result in additional impacts to farmlands and to wetlands along Baxter Creek. It would also result in a reverse curve, creating a potential hazard to motorists.
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. ☒ ☐
   An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.

   Descriptions are detailed above.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. ☒ ☐
2. Measures to minimize harm include the following:

   a) A pedestrian/bike path will be provided with this project and improve access to the site.

   b) Centerline has been shifted to the south of the existing centerline to minimize impacts.

   c. Right-of-way width has been reduced to minimize impacts.

COORDINATION

1. The proposed project has been coordinated with the following.

   a) SHPO (date: **August 6, 2002**) ☐ ☐

   b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) (date:) ☐ ☐
   ACHP coordination was not required since the proposed project would have no adverse effect on the site.

   c) Property owner ☐ ☐
   The property owner will be contacted as part of the right-of-way acquisition process.

   d) Local/State/Federal agencies ☐ ☐
   SHPO

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:
   SHPO comments: Concurrence with MDT finding of No Adverse Effect to the sites.

SUMMARY

All required ALTERNATIVES have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" Section 4(f) evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Jean A. Riley

Date: 11/27/02

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Approved: Jane R. Hamsmar

Date: 1/27/03

Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION

"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: CAWLFIELD HOMESTEAD

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	☒
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	☐	☒
4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)?	☒	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? **(See Appendix A--concurrence dated August 6, 2002.)**	☒	☐
6. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
7. Is the proposed project on a new location?	☐	☒
8. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

ALTERNATIVES CONSIDERED

1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐

	YES	NO

ALTERNATIVES CONSIDERED (continued)

2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. ☒ ☐
   Shifting the roadway to the north at this location would result in an increase to impacts to residences along the north side of the roadway and possibly to Spring Creek which is near the site. It would also result in a reverse curve, creating a potential hazard to motorists.
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. ☒ ☐
   An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.

   Descriptions are detailed above.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. ☒ ☐
2. Measures to minimize harm include the following:
   a) **A curb and gutter cross section is proposed to reduce required width and to minimize impacts to the site.**
   b) **A pedestrian/bike path will be provided with this projectand will improve access to the site.**

COORDINATION

1. The proposed project has been coordinated with the following.
   a) SHPO (date: **August 6, 2002**) ☐ ☐
   b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) (date:) ☐ ☐
      ACHP coordination was not required since the proposed project would have no adverse effect on the site.
   c) Property owner ☐ ☐
      The property owner will be contacted as part of the right-of-way acquisition process.
   d) Local/State/Federal agencies ☐ ☐
      SHPO
2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:
   SHPO comments: Concurrence with MDT finding of No Adverse Effect to the sites.

SUMMARY

All required ALTERNATIVES have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" Section 4(f) evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f.**

Jean A. Riley

Date: 11/27/02

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Approved: Jean K. Hartman

Date: 1/27/03

Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION

"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: LINDEKUGEL HOMESTEAD

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	☒
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	☐	☒
4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)?	☒	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? **(See Appendix A--concurrence dated August 6, 2002.)**	☒	☐
6. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
7. Is the proposed project on a new location?	☐	☒
8. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

ALTERNATIVES CONSIDERED

1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐

	YES	NO

ALTERNATIVES CONSIDERED (continued)

2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. ☒ ☐
   Shifting the roadway to the south at this location would result in increased impacts to the residences along the south side of the roadway and to farmland, and possibly to the Cawlfield Homestead (another eligible site).
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. ☒ ☐
   An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.

   Descriptions are detailed above.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. ☒ ☐
2. Measures to minimize harm include the following:
   a) **A curb and gutter section is proposed at this location to reduce required width and to minimize impacts to the site.**
   b) **A pedestrian/bike path will be provided with the project and will improve access to the site.**

COORDINATION

1. The proposed project has been coordinated with the following.
   a) SHPO (date: **August 6, 2002**) ☐ ☐
   b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) (date:) ☐ ☐
      ACHP coordination was not required since the proposed project would have no adverse effect on the site.
   c) Property owner ☐ ☐
      The property owner will be contacted as part of the right-of-way acquisition process.
   d) Local/State/Federal agencies ☐ ☐
      SHPO
2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:
   SHPO comments: Concurrence with MDT finding of No Adverse Effect to the sites.

SUMMARY

All required ALTERNATIVES have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" Section 4(f) evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Date: 11/27/02

Approved: _____
Federal Highway Administration

Date: 1/27/03

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION
"NATIONWIDE" *SECTION 4(f)* EVALUATION
FOR MINOR USAGE OF
PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: VALLEY GROVE PHASE 4

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the amount and location of the proposed impact area impair the use of the remaining *Section 4(f)* land for its intended purpose?	☐	☒
3. Does the proposed project require more than a minor amount* of the *Section 4(f)* site for Right-of-Way?	☐	☒
4. Are there any proximity impacts which would impair the use of the *4(f)* lands for their intended purpose (defined as "constructive use")?	☐	☒
5. Have the officials with jurisdiction over the property agreed in writing with the assessment of impacts and the proposed mitigation? **Gallatin County has expressed conceptual concurrence in writing (see Appendix A--letter dated 8/1/02).**	☒	☐
6. Have Federal funds—such as the *National Land & Water Conservation Fund-Section 6(f)*—been used for the acquisition of, or improvements to the *4(f)* site?	☐	☒
If yes—has the land conversion/transfer been coordinated with the appropriate Federal agency, (12) ( )	☐	☐
and are they in agreement?	☐	☐
7. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
8. Is the proposed project on a new location?	☐	☒
9. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.

	YES	NO
ALTERNATIVES CONSIDERED		
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐
2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. **Shifting the roadway to the south would result in an increased in impacts to another parkland at the Wiley Creek Subdivision and to wetlands along McDonald-Wylie Creek.**	☒	☐
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. **An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.**	☒	☐
Descriptions are detailed above.		
MINIMIZATION OF HARM		
1. The proposed project includes all possible planning to minimize harm.	☒	☐
2. Measures to minimize harm include the following: **a. Pedestrian/bike path will provide improved access to the site.** **b. The curb and gutter treatment along the south side of the roadway decreases the overall width required, thereby minimizing impacts to the site.**		
COORDINATION		
1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the *4(f)* lands. **List:** **Gallatin County**	☒	☐
2. In the case of non-federal *4(f)* lands, the official with jurisdiction has been asked to identify any Federal encumbrances—and none exist. **Based on available information, no federal encumbrances are known.**	☒	☐
3. Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending.	☐	☒

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" *Section 4(f)* Evaluation approved on December 23, 1986, and is submitted pursuant to **49 U.S.C. 303**.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

Jean A. Riley

Date: 11/27/02

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Approved: George K. Kaufman

Date: 1/27/03

Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION
"NATIONWIDE" *SECTION 4(f)* EVALUATION
FOR MINOR USAGE OF
PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: WILEY CREEK SUBD. PARKLAND

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the amount and location of the proposed impact area impair the use of the remaining *Section 4(f)* land for its intended purpose?	☐	☒
3. Does the proposed project require more than a minor amount* of the *Section 4(f)* site for Right-of-Way?	☐	☒
4. Are there any proximity impacts which would impair the use of the *4(f)* lands for their intended purpose (defined as "constructive use")?	☐	☒
5. Have the officials with jurisdiction over the property agreed in writing with the assessment of impacts and the proposed mitigation? **Gallatin County has expressed conceptual concurrence in writing (see Appendix A--letter dated 8/1/02).**	☒	☐
6. Have Federal funds—such as the *National Land & Water Conservation Fund-Section 6(f)*—been used for the acquisition of, or improvements to the *4(f)* site?	☐	☒
If yes—has the land conversion/transfer been coordinated with the appropriate Federal agency, (12) (_____)	☐	☐
and are they in agreement?	☐	☐
7. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
8. Is the proposed project on a new location?	☐	☒
9. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.

	YES	NO
ALTERNATIVES CONSIDERED		
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐
2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. **Shifting the roadway to the north would result in increased impacts to residential properties and to the Valley Grove Phase 4 parkland.**	☒	☐
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. **An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.**	☒	☐
Descriptions are detailed above.		
MINIMIZATION OF HARM		
1. The proposed project includes all possible planning to minimize harm.	☒	☐
2. Measures to minimize harm include the following: **a. Pedestrian/bike path will provide improved access to the site.** **b. The curb and gutter treatment along the south side of the roadway decreases the overall width required, thereby minimizing impacts to the site.**		
COORDINATION		
1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the *4(f)* lands. **List:** **Gallatin County**	☒	☐
2. In the case of non-federal *4(f)* lands, the official with jurisdiction has been asked to identify any Federal encumbrances—and none exist. **Based on available information, no federal encumbrances are known.**	☒	☐
3. Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending.	☐	☒

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" *Section 4(f)* Evaluation approved on December 23, 1986, and is submitted pursuant to **49 U.S.C. 303**.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

Jean A. Riley

Date: 11/21/02

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Approved: Gene K. Kaufman

Date: 1/27/03

Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

MONTANA DIVISION
"NATIONWIDE" *SECTION 4(f)* EVALUATION
FOR MINOR USAGE OF
PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

Project #: **STPS 235-1(8)0 Control No. 4470** Date **September 5, 2002**

Project Name: **East Valley Center Road** Location: **Bozeman, MT**

Site: SHAKIRA SUBDIVISION SITE

NOTE: *Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.*

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	☒	☐
2. Does the amount and location of the proposed impact area impair the use of the remaining *Section 4(f)* land for its intended purpose?	☐	☒
3. Does the proposed project require more than a minor amount* of the *Section 4(f)* site for Right-of-Way?	☐	☒
4. Are there any proximity impacts which would impair the use of the *4(f)* lands for their intended purpose (defined as "constructive use")?	☐	☒
5. Have the officials with jurisdiction over the property agreed in writing with the assessment of impacts and the proposed mitigation? **Gallatin County has expressed conceptual concurrence in writing (see Appendix A--letter dated 8/1/02).**	☒	☐
6. Have Federal funds—such as the *National Land & Water Conservation Fund-Section 6(f)*—been used for the acquisition of, or improvements to the *4(f)* site?	☐	☒
If yes—has the land conversion/transfer been coordinated with the appropriate Federal agency, (12) (_____)	☐	☐
and are they in agreement?	☐	☐
7. Is the proposed action under an Environmental Impact Statement (EIS)?	☐	☒
8. Is the proposed project on a new location?	☐	☒
9. The Scope-of-Work for the proposed project is one of the following:	☒	☐

a) Improved traffic operation;
b) Safety improvements;
c) 3R;
d) Bridge replacement on essentially the same alignment; or
e) Addition of lanes.

*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.

	YES	NO
ALTERNATIVES CONSIDERED		
1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. **The do nothing alternative would not meet purpose and need and would not include the safety improvements developed in response to above average accident rates.**	☒	☐
2. An **ALTERNATIVE** has been evaluated which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. **Shifting the roadway to the north would result in increased impacts to residential properties to the north. A shift in the roadway at this location would result in a reverse curve, creating potential hazard for the motorist.**	☒	☐
3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. **An alternative on a new alignment would cause impacts to other historic properties, farmlands, residences and wildlife. For these reasons a new alignment was not considered to be prudent or feasible.**	☒	☐
Descriptions are detailed above.		
MINIMIZATION OF HARM		
1. The proposed project includes all possible planning to minimize harm.	☒	☐
2. Measures to minimize harm include the following: **a. Pedestrian/bike path will provide improved access to the site.** **b. The curb and gutter treatment along the south side of the roadway decreases the overall width required, thereby minimizing impacts to the site.**		
COORDINATION		
1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the *4(f)* lands. **List:** **Gallatin County**	☒	☐
2. In the case of non-federal *4(f)* lands, the official with jurisdiction has been asked to identify any Federal encumbrances—and none exist. **Based on available information, no federal encumbrances are known.**	☒	☐
3. Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending.	☐	☒

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" *Section 4(f)* Evaluation approved on December 23, 1986, and is submitted pursuant to **49 U.S.C. 303**.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

Jean A. Riley — Date: 11/21/02

Jean A. Riley, P.E.
Engineering Bureau Chief
Environmental Services

Approved: Joseph A. Kaufman — Date: 1/27/03

Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

NOTICE OF AVAILABILITY

East Valley Center Road Environmental Assessment

STPS 235-1(8)0

PUBLIC HEARING/OPEN HOUSE

An Open House and Public Hearing will be held to provide information on the project and take public comments on the EA addressing the proposed improvements for East Valley Center Road. The Environmental Assessment and the preliminary design plans for the reconstruction of the East Valley Center Road from its junction with Jackrabbit Lane (MT 85) to the I-90 underpass road will be available for review. The schedule of remaining activities and construction will be presented. The Open House and the Public Hearing on the EA will be held on:

Wednesday, March 5, 2003
Wingate Inn
2305 Catron Street, Bozeman
(Just off 19th St, I-90 Exit 305)
Open House: 4pm to 7pm
Public Hearing on EA: 7pm

The Federal Highway Administration (FHWA) and the Montana Department of Transportation (MDT) invite interested individuals, organizations, and federal, state, and local agencies to review the EA and provide comments.

Viewing Locations

Copies of the EA will be available for public review beginning February 10 at the following locations:

- **Bozeman Public Library**, Alice Meister, Director, 220 East Lamme, Bozeman, MT 59715
- **Belgrade Community Library**, 106 Broadway Box 929, Belgrade, MT 59714

How to Comment

A 30-day calendar-day review period will **begin on February 12, 2003**, and **conclude on March 14, 2003.** To request a copy of the EA, call MDT at (406) 444-7228. Oral or written comments may be presented at the Public Hearing/Open House. Written comments on the EA may also be addressed to: Jean Riley, MDT Environmental Services, 2701 Prospect Avenue, PO Box 201001, Helena, MT 59620-1001 **by March 14, 2003.**

For further information contact:

Jim Weaver, WGM Group, P.O. Box 16027, Missoula, MT 59808, 1-800-537-2413, weaver@wgmgroup.com

To arrange special accommodations for persons with disabilities, call MDT at (406) 494-9625. For TTY call (406) 444-7696 or (800) 335-7592

Carter::Burgess

707 17th Street, Suite 2300
Denver, Colorodo 80202-3404
Phone: 303.820.5240
Fax: 303.820.2402
www.c-b.com

February 5, 2003

State Library
Collection Management Librarian
1515 East 6th Avenue
Helena, MT 59620-1800

Re: East Valley Center Road reconstruction project
Junction MT-85 East, STPS 235-1(8)0

To the Librarian:

Enclosed is one copy of the Environmental Assessment (EA) for the East Valley Center Road reconstruction project, also referred to as Junction MT-85 East, STPS 235-1(8)0. A notice of availability has been published (see attached) and a public hearing/open house for this project will be held on:

Wednesday, March 5, 2003
Wingate Inn
2305 Catron Street, Bozeman
(Just off 19th St., I-90 Exit 305)
Open House: 4:00 p.m. to 7:00 p.m.
Public Hearing on EA: 7:00 p.m.

To arrange special accommodations for persons with disabilities, call MDT at (406) 494-9625
For TTY call (406) 444-7696 or (800) 335-7592.

Viewing locations have been established for the public to review this EA and a comment period has been set beginning on February 12, 2003, and concluding on March 14, 2003. Written comments should be forwarded to Jean Riley, Environmental Services, Montana Department of Transportation, P.O .Box 201001, Helena, MT 59620-1001 no later than **March 14, 2003.** Please keep this copy of the EA for your records.

Questions concerning this project or the public hearing should be directed to:
Jim Weaver, WGM Group, P.O. Box 16027, Missoula, MT 59808, 1-800-537-2413, jweaver@wgmgroup.com

Thank you for your assistance in this matter.

Sincerely,

Sandi C. Kohrs
Carter & Burgess, Inc.
Environmental Manager

cc: File #070789.300

Enclosure: one copy of EA

J:_Transportation\070789.300.1.0001\manage\pubinv\EADistributionLetter.doc